



VISUAL ZONES & VIEWSHEDS

SCENIC QUALITY

VISUAL SENSITIVITY

VISUAL QUALITY OBJECTIVE

VISUAL CONTRAST RATING

REDUCING VISUAL CONTRAST

UNITED STATES GOVERNMENT - Bureau of Land Management

Memorandum

6300

TO : District Manager, Craig

DATE: August 24, 1976

FROM : EIS Team Leader

SUBJECT: VRM - Craig District Supplement

Enclosed are four (4) copies of a "Here's How" booklet on the Bureau's new Visual Resource Management (VRM) system which I began work on this spring at the District Office. We were able to complete it at this office during breaks in the typing workload, especially prior to the core team's arrival on August 2.

The supplement incorporates revisions Andy Wenchell made for the State which he originally planned to manualize in a special Colorado supplement. While using the system in working on the Great Divide/Maybell URA and also in the Skull Creek Activity Plan, several improvements were made.

I think this booklet will provide the guidance needed to enable our District to fully implement the system. Please retain one copy in the District Office Library for use by the Little Snake R.A. and District staff. Two more copies should be sent to Kremmling and White River R. A.s. A draft cover memo is also enclosed to be attached to each copy.

In the course of developing the booklet, I received several requests for assistance from those trying to implement the system in other districts. Apparently, difficulties in implementing the system are statewide. Please send the fourth copy to the State Director, 5-931; reproduction of the supplement, or a modification of it may also be helpful to the remainder of the State. A draft memo to accompany this copy is also enclosed.

Dow Bruns

Enclosures

cc:NW Colo. Coal EIS Project Office



5010-108

Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

UNITED STATES GOVERNMENT - Bureau of Land Management

Memorandum

6300

TO : State Director, 5-931

DATE: August 24, 1976

FROM : District Manager, Craig

SUBJECT: VRM - Craig District Supplement

Enclosed is a copy of a VRM supplement prepared for the Craig District. We found that there is yet a good deal of confusion as to how to implement the new VRM system; as a result Don Bruns gathered information from the Bureau's 6300 Manual as modified by Andy Wenchell for the State, and compiled a "Here's How" booklet.

In draft form it was used on the Great Divide/Maybell URA and the Skull Creek Activity plan and subsequently rewritten in its present form.

We are using it in the District to help us implement the system. The booklet is divided into the six major VRM Sections with a concepts section following to provide a more basic understanding and appreciation of VRM.

Gene Miller requested a copy of the booklet and we are sending this copy in response to his request. Please let us know if you have any comments. We have retained the original copy and photos.

cc:N.W.Colo. Coal EIS Project Office



5010-108

Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

U.S. DEPARTMENT OF JUSTICE - Bureau of Investigation

Memorandum

Page

Date: August 27, 1935

TO: Chief of Bureau

FROM: Special Agent in Charge, Chicago

SUBJECT: [Illegible]

Enclosed for the Bureau are two copies of a report prepared by the Chicago Office on the subject of [illegible]. The report contains information regarding the activities of [illegible] and is of a confidential nature. It is recommended that the report be handled as such.

The Chicago Office has also received information regarding the activities of [illegible] and is continuing its investigation in this matter.

Very respectfully,
[Illegible Signature]

Enclosed for the Bureau are two copies of a report prepared by the Chicago Office on the subject of [illegible]. The report contains information regarding the activities of [illegible] and is of a confidential nature. It is recommended that the report be handled as such.

Very truly yours,
[Illegible Signature]

The U.S. Bureau of Investigation is at the Chicago Office

UNITED STATES GOVERNMENT - Bureau of Land Management

Memorandum

6300

TO : Area Managers: LSRA, KRA & WRRRA; and
District Chief of Resource

DATE: August 24, 1976

FROM : District Manager, Craig

SUBJECT: VRM - Craig District Supplement

Enclosed are two copies of the recently completed Craig District VRM manual supplement for your library. The manual is in accordance with the 6300 Manual as revised by Andy Wenchell, Landscape Architect, CSO.

Field tested on the Maybell/Great Divide URAs and the Skull Creek Activity Plan, it provides an orderly approach for implementing the VRM system with practical helps on how-to-do-it. A "Concepts" section in the back provides some background material supporting the VRM system to help you use it more effectively.

The color-coded series of overlays and dividers provide a handy outline for the six major sections of the VRM system. All future VRM work prepared in the District will be mapped according to this color code to establish uniformity.

If you have any questions, please contact Don Bruns.

cc:State Director, 5-931



Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

UNITED STATES GOVERNMENT - Bureau of Land Management

Memorandum

TO: Chief, District Office, Boise

FROM: District Manager, Boise

SUBJECT: New - Early District, Significant

Enclosed are two copies of the report, "Early District, Significant", prepared by the District Office, Boise, dated 10/10/54. The report is in accordance with the BLM Manual as revised by the National Forest Management Act, 1936.

Field notes on the investigation of the Early District, Boise, are also enclosed. It is requested that you review the report and field notes and advise the District Office, Boise, of any comments or suggestions. A copy of the report and field notes is being furnished to the District Office, Boise, for their information.

The color-coded copies of the report and field notes are being furnished to the District Office, Boise, for their information. The report and field notes are being furnished to the District Office, Boise, for their information.

If you have any questions, please contact the District Office, Boise.

Respectfully,
District Manager, Boise

By U.S. Forest Service, Boise

UNITED STATES GOVERNMENT - Bureau of Land Management

Memorandum

6300

TO : Area Managers: LSRA, KRA & WRRRA; and
District Chief of Resource

DATE: August 24, 1976

FROM : District Manager, Craig

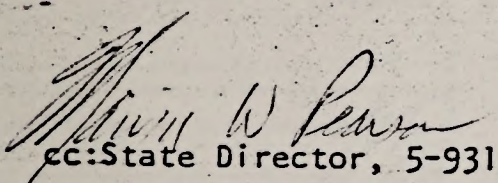
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cc:State Director, 5-931



Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

UNITED STATES GOVERNMENT - Bureau of Land Management

RECEIVED

10

At Santa Fe, N.M., 1970

TO: Mr. J. Edgar Hoover, Director, FBI

FROM: Mr. [Name], Chief

SUBJECT: [Subject]

Enclosed are two copies of the monthly report of the Santa Fe District Office for the month of [Month], 1970. The report is in accordance with the BLM Manual, as revised by the [Department], [Bureau], [Division], [Section], [Office], [City], [State], [Country].

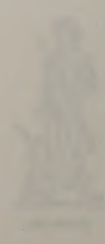
Field located on the [Location] [County] [State] and [County] [State] [City] [State]. It contains a [Description] of the [Location] and [County] [State] [City] [State]. The [Location] is [Description] of the [Location] and [County] [State] [City] [State]. The [Location] is [Description] of the [Location] and [County] [State] [City] [State]. The [Location] is [Description] of the [Location] and [County] [State] [City] [State].

The [Location] is [Description] of the [Location] and [County] [State] [City] [State]. The [Location] is [Description] of the [Location] and [County] [State] [City] [State]. The [Location] is [Description] of the [Location] and [County] [State] [City] [State]. The [Location] is [Description] of the [Location] and [County] [State] [City] [State].

If you have any questions, please contact the [Location] [County] [State] [City] [State].

[Signature]
[Name]
[Title]

Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan



UNITED STATES GOVERNMENT

Bureau of Land Management

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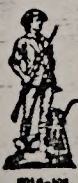
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Marvin W. Pearson

cc:N.W.Colo. Coal EIS Project Office



Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

Don Bruns

QH
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C6
C73
1976

PREFACE

This booklet is a guide for managing the Visual Resource; essentially HOW TO DO IT. Many of the photographs were taken within the Craig District, and the map-overlay section was assembled for an area about ten miles southwest of Craig to enable you to more readily use it and familiarize yourself with it on-the-ground.

Given certain manual changes forthcoming in a special Colorado supplement, as per Andy Wenchell's adaptations (1976), this guide reflects provisions of the new 6300 Manual for Visual Resource Management (VRM). The working section of this booklet consists of six sections covering the six phases of VRM (each color-coded to the VRM outline on page 2). A brief "Concepts" section follows the working section to provide a greater appreciation and understanding of the ideas behind VRM -- to help you "get it together".

. . . plan in full awareness of nature's forces, forms, and features -- the sweep of the sun, the air currents, the peaks and hollows of the earth, rock and soil strata, vegetation, lakes and streams, watersheds and natural drainage ways -- and this awareness should obviously entail planning in harmony with the elements of nature. If we disregard them we will engender countless unnecessary frictions and preclude those experiences of fitness and compatibility that can bring so much pleasure and satisfaction to our lives.

John O. Simonds
Landscape Architecture

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BASE MAP -- Inside Back Cover

Why VRM?

During the last several years, the quality of our environment has become increasingly important to a large segment of our population. Since one of the major components of a quality environment is the way it appears, aesthetics is receiving more and more attention from both the public and from land management agencies. Many of the BLM's land management activities involve some alteration of the natural character of the landscape. Because these alterations can change the landscape character, it is imperative that these changes be understood and treated in a manner that reinforces the natural character and quality of the landscape.

It must be recognized that there is a variety of scenic values on national resource lands and there are numerous other resources with management objectives that may not coincide with the protection of the visual resources. These different values and different objectives warrant different levels of protection for the visual resource.

Because it is not practical to provide the same degree of management to the visual resources on all BLM lands, it becomes necessary to have a system to evaluate the visual resources and to determine what degree of protection is desirable and practical and provide a method of controlling our management activities to afford that protection.

BLM's Associate Director, George Turcott, addressed the VRM instructor workshop held in November, 1975, in Denver. He noted that many of NRDC's actions against the Bureau in the recent past have been based, to a great degree, on the Bureau's failure to address visual resources in environmental reporting procedures. Now public pressure requires a "professionalization" of visual resource management. Turcott stated that the Bureau's charter requires optimization of all resource values; he also emphasized that now VRM is another of these resources, deserving equal recognition.

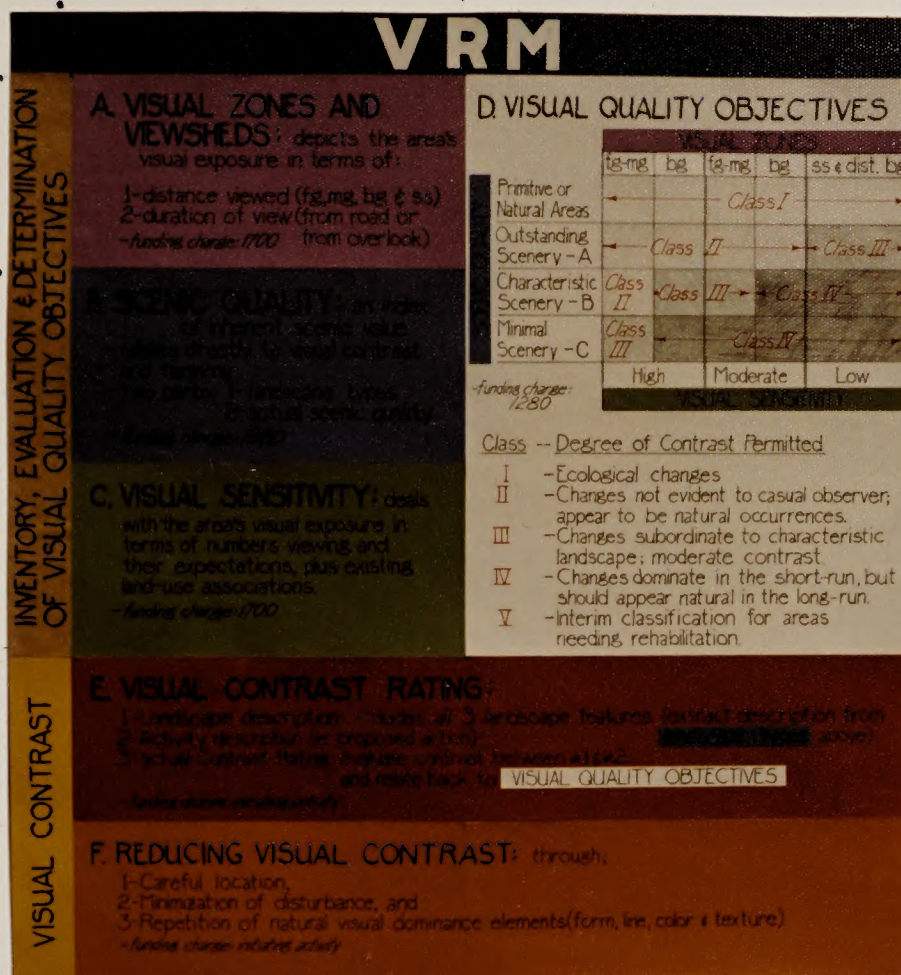
What VRM does.

Visual Resource Management focuses on how man visually perceives his environment; eighty-seven percent of man's sensory perception is based on sight. Therefore, the VRM system avoids discussion of the human-interest aspects of the environment which challenge the mine (i.e., largely interpretive, educational and scientific values) recognition of these values is not to be confused with man's sensory perception of his environment.

Initially, VRM provides an inventory system for objectively evaluating the visual aspect of the land we manage to determine management objectives that prescribe allowable limits for landscape alteration.

Secondly, VRM measures the degree to which proposed actions would contrast with the existing landscape character. This measure of contrast is related back to the predetermined objectives; if contrast is too great, the intended action is redesigned until it fits within the allowable contrast limits.

How VRM works:



This chart illustrates the six basic components of the VRM system. The first four steps under Inventory, Evaluation and Determination of Visual Quality Objectives are completed in URA-MFP planning to arrive at a determination of Step 1 MFP recommendations.

- A) Relative visibility of proposed landscape alterations is determined by the distance at which an object is viewed and the duration of the view. This is measured by visual zones and viewsheds.
- B) Scenic quality is essentially a measure of landscape variety; this is both an index of inherent scenic value, and an index of the landscape's ability to absorb landscape modification while still maintaining visual harmony.
- C) An evaluation of people's attitudes, lifestyles and expectations determines whether people will be sensitive to obvious incongruous features in the landscape. The VRM system measures this sensitivity and numbers of viewers as another index of potential for adverse visual impact.
- D) Based on the foregoing considerations, the VRM system prescribes management objectives which set a variety of limits as to how well proposed landscape alterations should "fit" into the characteristic landscape. Limits are most restrictive for landscapes having the greatest scenic quality, visual exposure and visual sensitivity.

Field experience has shown that completion of the first four steps is most readily accomplished in the order shown above; by traveling surfaced and improved public roads to map visual zones, one can get a better impression of both scenic quality and visual sensitivity.

The last two steps of the VRM system deal with project application. They are completed to determine if Step III MFP recommendations, as well as other proposed actions (as addressed in EARs and EISs), would meet VRM management objectives determined in Section D.

- E) Because opposition to visual intrusions stems largely from their noticeability, which is directly related to a lack of harmony and congruity, the Bureau's new VRM system was designed to determine whether or not proposed actions would "fit" into the landscape(s) into which they are to be placed. How well a project will "fit" into the characteristic landscape is determined by contrasting proposed changes in the three landscape features -- landform, vegetation and man-made structures -- with the characteristic landscape.
- F) When necessary to meet visual quality objectives (determined under A-D), a project can be made less noticeable by reducing its contrast with the adjacent landscape. The project will more easily fit into the characteristic landscape if it is properly located, if disturbance is minimized and if it borrows from the form, line, color and texture that is already there.

The need to separate one's self from the bias of personal preferences and value judgements to permit an objective analysis of how the landscape is visually perceived should become apparent. Aesthetic values, of which visual resources is a part, entreat the senses; but they do not challenge the intellect. Given the following guidelines uniform application of the VRM system to visual resource management problems can be expected.

WORKING SECTION

To use the remaining portion of this booklet, the reader should unfold the base map at the back. This working section is divided into six parts, each with an accompanying overlay(s) - - the divider for each section is color-coded to the VRM chart on page 2 that shows the interrelationship between these six parts.

Part I

INVENTORY, EVALUATION AND DETERMINATION OF VISUAL QUALITY OBJECTIVES

A. VISUAL ZONES AND VIEWSHEDS (URA STEP III)

Part 1 - Visual Zone Delineation: depicts distance from which landscape units are viewed.

a. Define FOREGROUND, MIDDLEGROUND and BACKGROUND ZONES

- | | | |
|---|---|--|
| - FOREGROUND (fg) - up to 1 mile | } | normally delineated as a unit, <u>fg-mg</u> ; delineate separately only for areas of high sensitivity (see p. 22). |
| - MIDDLEGROUND (mg) - fg up to 5-8 miles | | |
| - near BACKGROUND (bg) - mg up to 15-20 miles | | |

b. The remaining area will be delineated as SELDOM SEEN (ss) including:

- distant background (beyond 15-20 miles) and
- areas not visible from major public roads (i.e., visible only from the air, by horseback, from unimproved or four-wheel-drive roads and trails, etc.)

V
r
M A-1

visual
zones

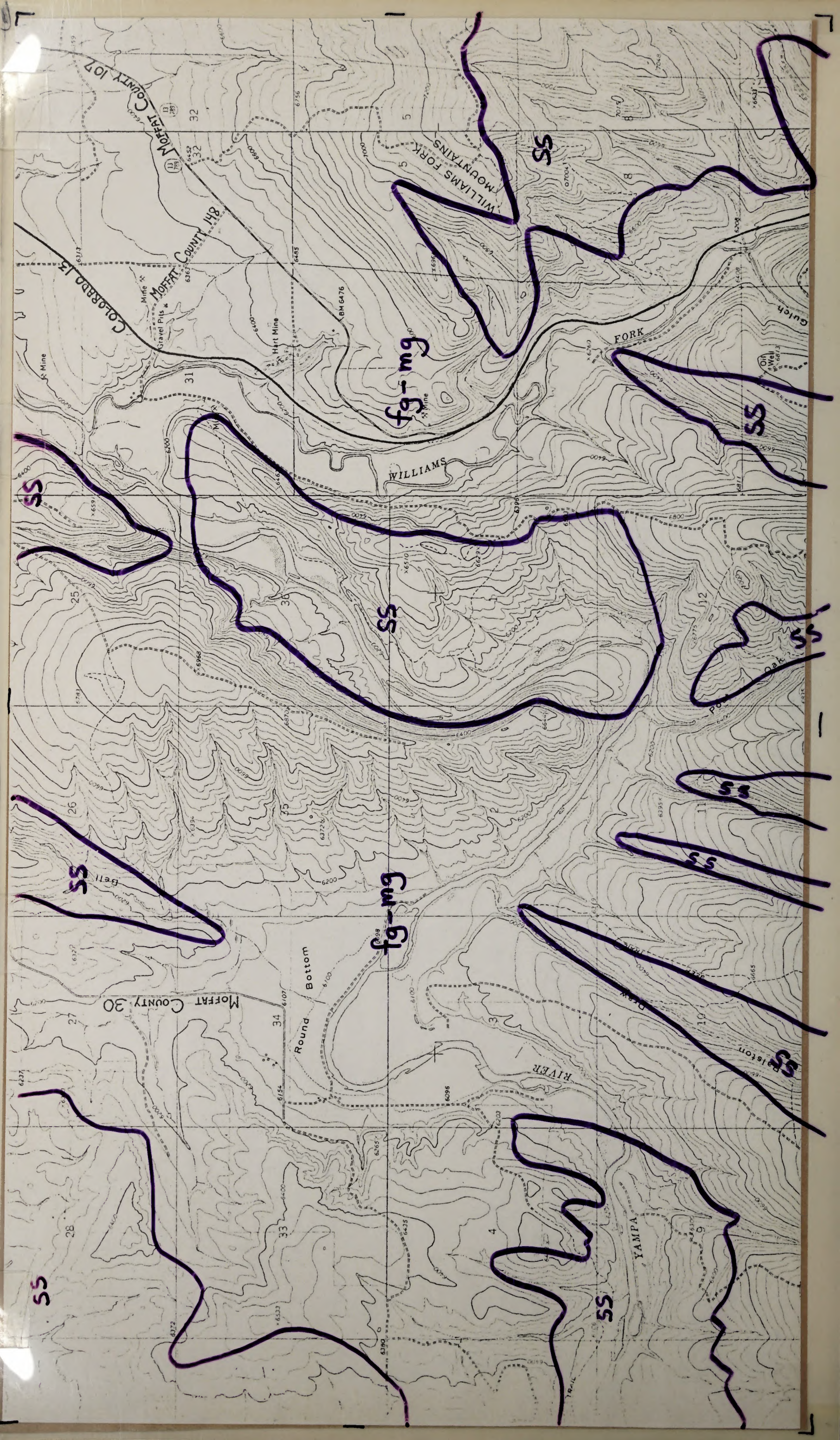
Visual Zones for base map overlay

Visual zones were mapped from Colorado highway 13 and from Moffat County 30, 107, and 148. Mapping symbols are as follows:

fg-mg: FOREGROUND-MIDDLEGROUND
(these are delineated separately on the viewsheds
overlay -- normally completed only for areas of
high sensitivity, see page 22)

bg: BACKGROUND

ss: SELDOM SEEN



Part 2 - Viewsheds/Landscape Visibility Mapping

Landscape visibility mapping suggests areas that are more visible than others. Not only does it show how visibility increases at closer distances, but it also illustrates how visibility increases when landscape units are visible from more road segments, longer road segments, and by motorists traveling in both directions.

Any road traverses a visual corridor that consists of all areas visible from that road. This corridor can be divided into smaller landscapes or viewsheds that are defined by the ridges, peaks and escarpments that surround these smaller landscapes. Though views may overlap from one viewshed to another, motorists naturally pass through successive viewsheds as they cross their respective topographic boundaries.

A single viewshed sequence is that segment of a road contained by any one viewshed. Transitional points between viewshed sequences, or viewshed sequence points, can be mapped to obtain reference points for classifying the landscape visible from each road segment.

Relative to each viewshed sequence, viewsheds may be subdivided into landscape visual units which includes all areas visible from that viewshed sequence; these are determined according to (1) their distance from the viewer, (2) the combinations of viewshed sequences offering the view and (3) the direction of travel along these viewshed sequences. Each landscape visual unit's relative visibility may be mapped accordingly.

This exercise should be completed only for viewsheds having high sensitivity, due to the time involved in mapping. It is not needed to determine Visual Quality Objectives, but it is helpful in determining the extent of areas having high visual sensitivity (see p. 22).

This exercise is also very helpful in determining the relative visibility of the various landscape visual units, especially as relates to project layout, assessment of potential environmental impacts and formulation of subsequent mitigating measures (e.g., in EARS and EISs).

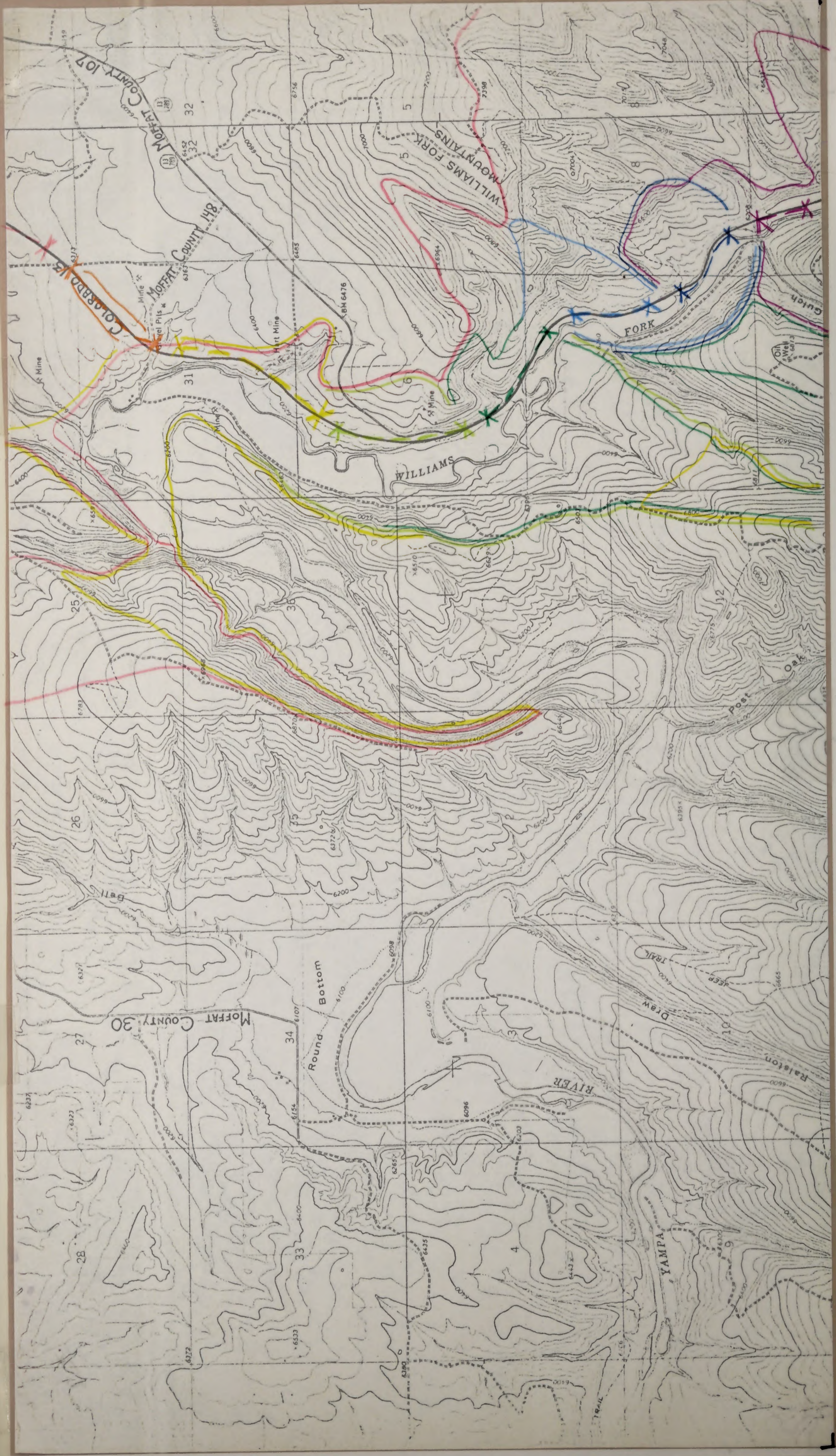
Y
F
M A-2 viewsheds

Field Map for Viewsheds/Landscape Visibility Mapping

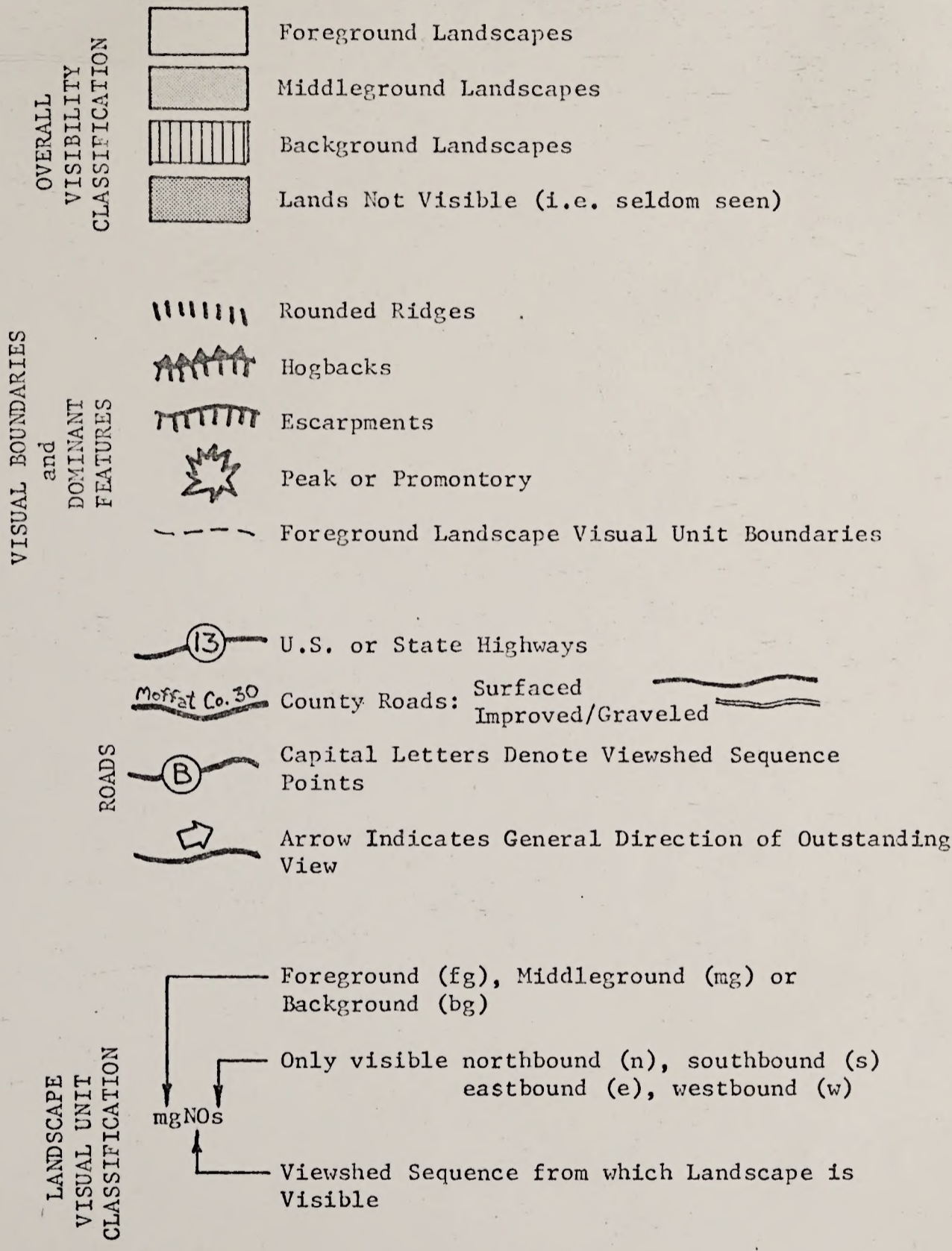
The attached page of frosted mylar illustrates one technique found to be effective in landscape visibility field mapping. By matching the viewshed sequence (road segment) color with that of a line which delineates the landscape visual unit, it is possible to map these overlapping units on the same page.

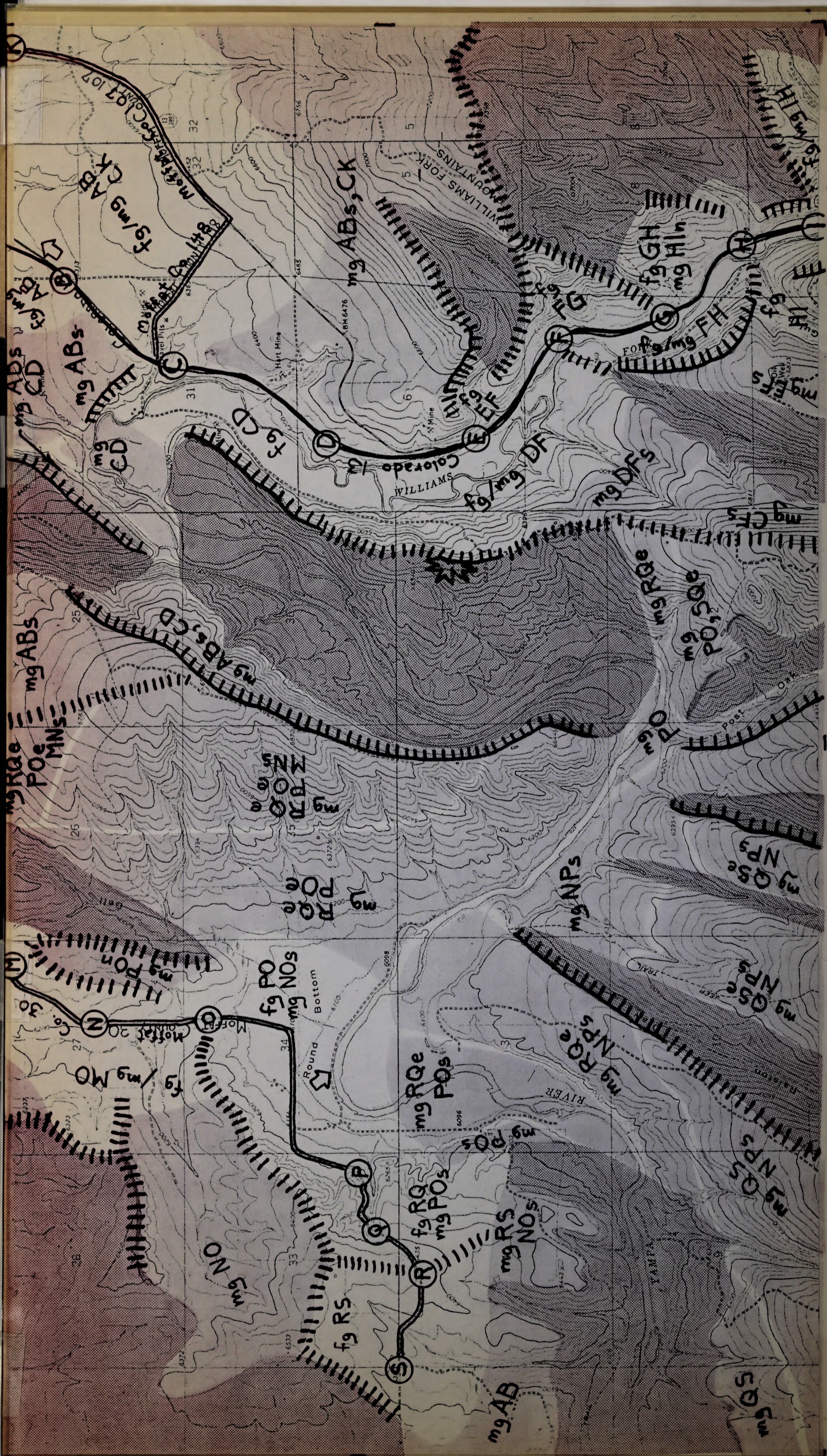
The complexity is compounded when more than one road provides visual access to an area. In this case it is helpful to use more than one overlay.

The attached overlay illustrates landscape visibility mapping from Colorado 13; a similar overlay was prepared along Moffat County 30 to arrive at the finished landscape visibility map (see p. 11).



Viewsheds--
Legend for landscape visibility mapping on base map overlay





B. SCENIC QUALITY (URA STEP III)

As a measure of landscape variety, the scenic quality portion of the inventory consists of two parts: 1) determination of landscape types and 2) actual scenic quality rating.

But frames of reference must first be established to objectively evaluate inherent scenic values. For example, comparison of landscape variety in Routt County with that of Weld County (northeastern Colorado) is misleading because this statewide basis for comparison would render most of Routt County as outstanding scenery and most of Weld County as minimal scenery. This approach would provide no relative guidance on a regional basis to assist in determining visual management objectives and thereby restrict visual encroachments from units having greater landscape variety (inherent scenic value).

In reality, the overall landscape character in each region objectively establishes a valuable basis for comparison. By definition, the largest portion of any landscape has characteristic (B) scenic quality; smaller units within that region have either greater (outstanding - A) or lesser (minimal - C) landscape variety.

Colorado is renowned for its colorful and spectacular scenery. Nevertheless, there are considerable regional differences between the scenery of the Central Rocky Mountains, that of the High Plains and that of the Colorado Plateau (western Colorado); there are physiographically -- and therefore visually -- essentially three "Colorados". Three Scenic Quality Evaluation Charts have been prepared to reflect these differences and to establish a realistic basis for evaluating landscape variety (the chart for the Colorado Plateau applies to the problem in this booklet and follows on page 13; the remaining two are appended for future use).

The weighing of the various factors on these charts and the range of total scores is designed to assist in arriving at a more objective evaluation of scenic quality.

URA Step 3 documents consist of map overlays and narratives displaying the following information:*

Part 1 - Landscape types;

Factors 1-4 on the appropriate chart for the physiographic region (Rocky Mountain, Colorado Plateau, High Plains) should be used in delineating landscape types and defining them in narrative forms.

Part 2 - Scenic quality;

All factors 1-10 are to be considered in arriving at a judgment of scenic quality for each landscape type. A narrative description should be prepared for outstanding (A) and minimal (C) scenic quality classes addressing each of the factors 1-10 with all judgments adequately justified. All scenic quality classes should also be delineated.

* Supporting resource information needed to complete this section include vegetative type maps and aerial photos (see Appendix A-3).

SCENIC QUALITY EVALUATION CHART - - Colorado Plateau physiographic region

FACTORS	OUTSTANDING (A)	CHARACTERISTIC (B)	MINIMAL (C)	Notes - for justification to change from Class B (characteristic) to either Class A or C
1. LANDFORMS & ROCK OUTCROPPINGS (relief, scale & color and variety)	<div> <div> <div>— canyons —</div> <div>— cliffs —</div> <div>— badlands —</div> <div>— hogbacks —</div> </div> <div>4</div> </div>	<div> <div>— desert valley bottoms —</div> <div>— mesa tops & plateaus —</div> <div>— hilly rolling benches — — dissected by gulches —</div> <div>2</div> </div>	<div> <div>1</div> <div>0</div> </div>	<p>Outstanding canyons have great depth, high cliffs with low to moderate talus slopes, and vivid geologic colors - great variety essential.</p> <p>Outstanding cliffs have great height and low to moderate talus slopes - - great variety essential.</p> <p>Outstanding badlands are highly dissected, and vividly colored with many rock outcroppings - - great variety essential.</p> <p>Outstanding hogbacks have considerable height with cliffs exposing vividly colored rock strata and present a rugged skyline silhouette - great variety essential.</p> <p>Minimal desert valley bottoms are extensive flat featureless areas, usually more than one mile from valley walls - - lacking variety.</p> <p>Minimal mesa tops and plateaus are extensive flat featureless areas, usually more than 1/4 mile from rims (but depends on seen area analyses) - lacking variety.</p>
2. VEGETATION PATTERNS (color & variety)	<div> <div> <div>— ponderosa pine</div> <div>— douglas fir forests —</div> <div>— cottonwood river-bottoms —</div> <div>— mountain brushlands —</div> <div>— agricultural lands —</div> </div> <div>4</div> </div>	<div> <div>— desert shrublands</div> <div>— sagebrush lands —</div> <div>— pinyon juniper woodlands — — riparian willow grasslands —</div> </div>	<div> <div>1</div> <div>2</div> </div>	<p>Minimal desert shrublands and sagebrushland are broad expanses of uniform vegetative cover - - lacking variety.</p> <p>Outstanding ponderosa pine - douglas fir forests are stands with mature old growth timber, or intermixed with meadows and aspen groves - great variety essential.</p> <p>Outstanding cottonwood river bottoms are groves in otherwise arid treeless environments - - great variety essential.</p> <p>Outstanding mountain brushlands are areas broken up into irregular shaped clumps of brush interspersed with grassland - great variety essential.</p> <p>Outstanding agricultural lands include orchards, irrigated riparian meadows, pastoral landscapes, etc. These attract the eye and often stand out sharply against adjacent terrain - great variety essential.</p>
3. WATER FEATURES (presence & variety)	<div> <div>dominated by river lake or, large reservoir or a large variety of water features</div> <div>4</div> </div>	<div> <div>water present in creek pond or small reservoir - water only occasionally viewed.</div> <div>2</div> </div>	<div> <div>absent</div> <div>0</div> </div>	<p>Base evaluation of water features on most favorable time of year, usually spring runoff or early summer. Dominant water features are usually cascading whitewater or reflective still water.</p>

FACTORS	OUTSTANDING (A)	CHARACTERISTIC (B)	MINIMAL (C)	Notes
4. LAND USES	<input type="checkbox"/> natural <input type="checkbox"/> pastoral/cropland <input type="checkbox"/> mining <input type="checkbox"/> urban			Part of landscape type determination and basis for judging factor 5 but is not weighted.
5. INTRUSIONS	none <input type="checkbox"/> 2	few inharmonious intrusions <input type="checkbox"/> 1	dominated by in-harmonious intrusions <input type="checkbox"/> 0	Intrusions are judged in terms of harmony with land uses - a discordant element such as block pattern pinyon juniper chaining in a natural landscape type might be a harmonious element in pastoral landscape type.
6. LANDMARKS	dominant (foreground-middle-ground <input type="checkbox"/> 2	present (background) <input type="checkbox"/> 1	absent <input type="checkbox"/> 0	Landmarks are usually distinctive landforms (mountain peak) or unusual rock outcroppings (pinnacle) which orient people and contribute to a strong sense of place.
7. SPATIAL ENCLOSURE	strong sense (foreground-middle-ground walls) <input type="checkbox"/> 2	moderate sense (middle-ground walls) <input type="checkbox"/> 1	lacking <input type="checkbox"/> 0	Spatial enclosure - a sense of spatial enclosure (outdoor space) is created by steep landforms or forest edges (the walls) enclosing a more or less flat landform or water surface (the floor).
8. PANORAMIC EXPOSURE	views to distant background (more than 15 miles) & to intermediate zones as well. <input type="checkbox"/> 2	views to background (5 to 15 miles), including foreground and middle-ground. <input type="checkbox"/> 1	lacking <input type="checkbox"/> 0	Ridges, rims and desert valley bottoms often afford distant views and increase landscape variety.
9. CULTURAL FEATURES	prominent archaeological or historic structures, or cultural land patterns (e.g. orchards, strip farming, etc.) <input type="checkbox"/> 2	some archaeological or historic evidence visible or recent cultural land patterns. <input type="checkbox"/> 1	no visible evidence <input type="checkbox"/> 0	Visible cultural features (pre-historic, historic or recent) add visual interest and increase landscape variety.
10. VISUAL UNIQUENESS (not human interest)	unique or rare within region <input type="checkbox"/> 2	interesting or noteworthy <input type="checkbox"/> 1	very common within region <input type="checkbox"/> 0	Relative visual uniqueness within a region adds to the visual interest. (Don't confuse with interpretive-educational uniqueness.)

Factors 1-10 determine scenic quality class--Factors 1-4 determine landscape types

TOTAL 16 or more = Outstanding (A); 10% to 25% of region
7 to 15 = Characteristic (B); 50% to 80% of region
6 or less = Minimal (C); 10% to 25% of region

Part 1 - Defining Landscape Types

a. Procedure:

1. Define landscape types on basis of similarity of (using factors 1-4 on the Scenic Quality Chart):
 - landform and rock outcroppings
 - vegetation patterns
 - water features
 - land uses
 - natural
 - pastoral
 - mining
 - urban
2. Delineate landscape types on maps
3. Describe landscape types in narrative form in terms of visual dominance elements:
 - form
 - line
 - color
 - texture

b. Application:

Unlike steps A (Visual Zones), B-2 (Scenic Quality itself) and C (Visual Sensitivity); this definition of landscape types has no direct input into determination of Visual Quality Objective Classes. It's two primary purposes are to serve as:

1. Input into Step B-2, determination of actual Scenic Quality, and
2. A narrative landscape description for completing the Contrast Rating (Section E) and for Reducing Visual Contrast (Section F).

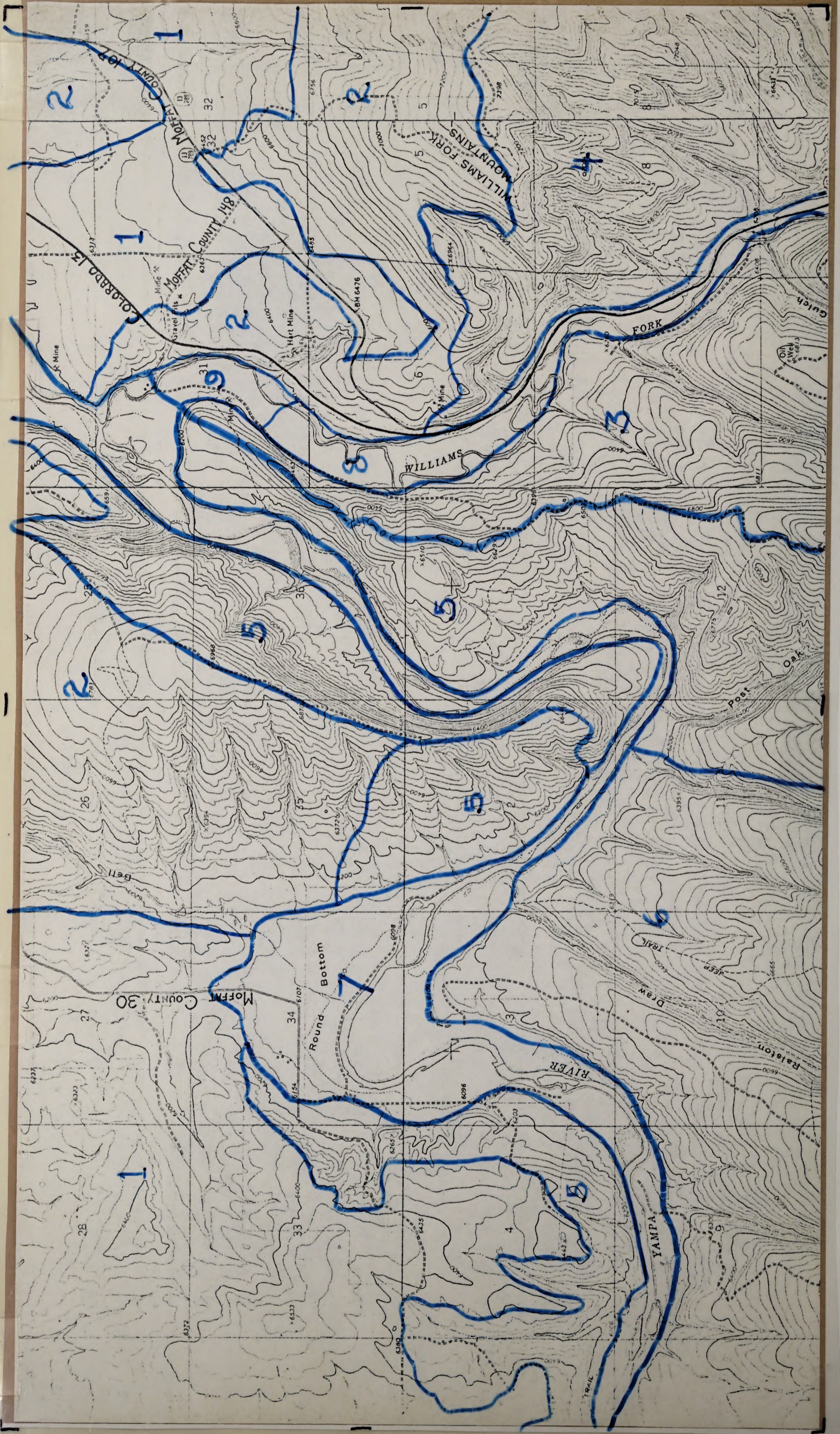
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B-1

landscape
types

Landscape Type descriptions for base map overlay

1. Landform in this type is rolling to flat and gently sloping, and consists largely of dryland cultivated wheat fields. Fields conform largely to an irregular shape following natural contours on mesa tops; however, some rectilinear forms are created by individual fields. Line dominance is largely exhibited along the periphery of fields, in roads and at the horizon. Color varies with the season of year and with farming practices: from gray-brown, to green, to a light buff-yellow. Fields are usually fine-textured in middleground landscapes regardless of season.
2. Rolling to rugged sagebrush landscapes occupy this area. Line dominance is usually exhibited in drainage patterns, roads, trails and along the horizon. Color appears as a dull blue-green hue throughout this type. Texture appears coarse, medium and fine in the foreground, middleground and background respectively.
3. Roughly sub-angular to rolling landform of this landscape type affronts the conspicuous curvilinear form of the Williams Fork River and Colorado highway 13; both are strongly line-dominant features. Rimrock outcrops are other horizontally-oriented and strongly line-dominant features of this landscape type. Coarse-textured and scattered stands of mountain shrub types occupy this landscape type. The landform and rock outcrops are buff to brown in color. North-facing slopes are speckled with purple-brown (winter) to green(summer) mountain shrub species.
4. This landscape type is very similar to no. 3; however, these south-facing slopes are speckled, yearlong, with coarse-textured dark green pinon/juniper trees.
5. This landscape type consists of rather rugged and steeply-sloping sagebrush-covered terrain. Because of steep slopes, rimrock exposures are common; their sub-angular form dominates some of this terrain--though most of it is steeply pitching and broken. Lines are especially dominant in ledges and at the horizon. The Yampa River is an especially prominent curvilinear form visible from this landscape. Rimrock outcrops are varicolored buff, brown and red colors; however, they are generally dull and quite subdued. Texture ranges from medium to coarse (in rimrock).
6. This landscape type compares with that of no. 2, however it is speckled with coarse-textured purple-brown (winter) to green (summer) mountain shrub vegetation.
7. Fine textured irrigated meadows and grassy pastoral fields lie adjacent to the dominant curvilinear form of the meandering Yampa River which is flanked by scattered coarse-textured cottonwood groves. Landform is essentially flat, although adjacent rocky hillsides contrast sharply with it. The river itself and the floodplain contact with adjacent hillsides form strong horizontal line dominance while the trees, especially at foreground distances, have strong vertical line dominance. Color varies widely with the seasons, from vivid green to buff to white. Moving water is a perennial feature of this landscape type.
8. Though the Williams Fork River is of a smaller scale than the Yampa, this landscape type is similar to no. 7. The greatest differences are that moving water is not always conspicuous, and this landscape is encroached upon by the strongly line-dominant and curvilinear Colorado highway 13.
9. This landscape type is merely a section of no. 8 that contains visual intrusions from the old Silengo Mine (currently Empire Energy's underground mine); line and color-dominant mining equipment are the most conspicuous elements in this landscape type.



Part 2 - Determine Scenic Quality

- a. Assume scenic quality of a major portion of each landscape type to be: CHARACTERISTIC (50-80% of region) - define sub-types within each landscape with OUTSTANDING (10-25% of region) and MINIMAL (10-25% of region) scenic quality on the basis of scenic quality factors, Nos. 1-10 on the appropriate scenic quality evaluation chart.
- b. Compare each landscape type (B-1) to the physiographic region and on the basis of scenic quality factors, classify each landscape type as:

OUTSTANDING, COMMON, or MINIMAL scenic quality.

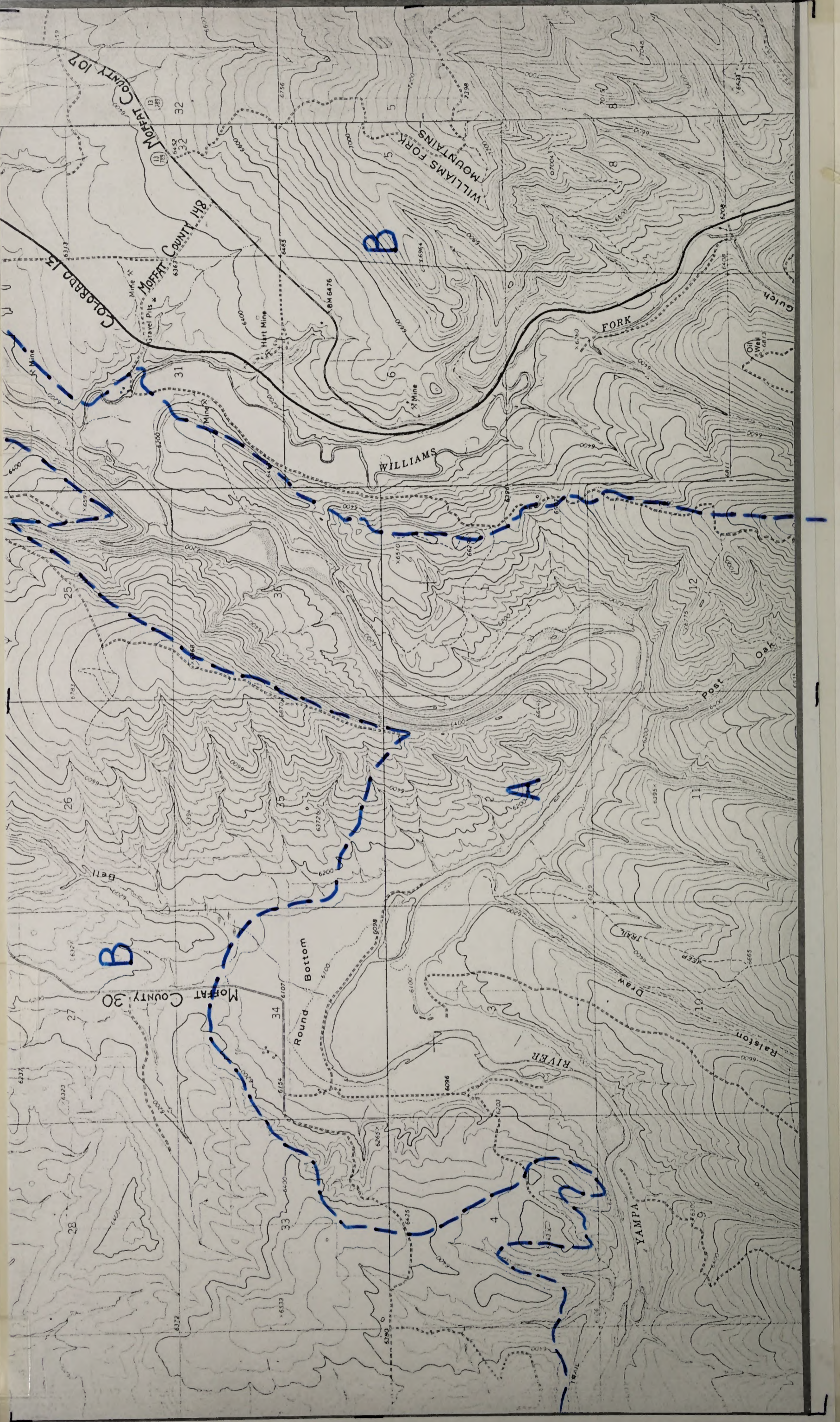
- c. Prepare a narrative description that justifies Outstanding (A) and Minimal (C) scenic quality ratings by addressing each of the scenic quality factors, 1-10. Narrative descriptions should be supplemented by photographs. All photographs should be taken with a normal lens (50-55mm) using a fine grained Black and White film (e.g., Panatomic-X, ASA 32). Where it is desirable to depict colors, color photographs should supplement (not replace) Black and White photo documentation.

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Scenic
quality

Narrative Description to Provide Justification for Outstanding Scenery
(Class A).

Outstanding landforms and rock outcroppings are scattered along the immediate influence zone of the Yampa River which is generally known as Little Yampa Canyon. A wide variety of vegetation includes outstanding cottonwood river bottoms with adjacent stands of pinon-juniper and mountain shrub species interspersed in a rolling to rugged sagebrush landscape. The Yampa River itself dominates this landscape; it is always in view and its motion is apparent. This area is largely in its natural condition having only a few intrusions in the form of unimproved roads and trails. Near the rim of this small canyon, panoramic views extend to background distances. Within the canyon, foreground walls create a strong sense of spatial enclosure. There is some cultural evidence of prehistoric occupation and some irrigated hay meadows. Though the area is not unique, it is rather interesting and noteworthy. As a result of these inherent scenic features, the area was classified as having outstanding scenic value.



C. VISUAL SENSITIVITY (URA STEP III)

1. Define areas, sites and corridors with HIGH, MODERATE and LOW visual sensitivity based on visual sensitivity guidelines (pp. 25 -26).
2. Delineate on map

V
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sensitivity

High Sensitivity

- A. Viewsheds of
 - 1. those portions of Interstate, State and U.S. Highway system including roadside rest areas which have not been visually encroached on within the immediate foreground by urban, suburban, mountain cabin/condominium, commercial, industrial, overhead powerline or outdoor advertising developments.
 - 2. communities whose economic base is largely dependent on tourism, or with a significant retired or urban commuter population, or with a large portion of the housing being second homes (mountain cabins/condominiums).
 - 3. components to, or areas proposed for inclusion in, the National Wilderness Preservation System, or managed as primitive or natural areas by BLM or the State of Colorado.
 - 4. National Parks or Monuments
 - 5. Components of, or segments proposed for, inclusion in the National Wild and Scenic River system.
 - 6. archaeologic or historic sites/districts on the National Register.
 - 7. intensively developed and utilized recreational or interpretive sites, water bodies and travel routes, including trails within National Recreation Areas, National Wildlife Refuges and State Parks and State Recreation Areas, or BLM-administered lands.
- B. Other areas as determined by the District/Area Managers due to local political considerations or relationship of BLM lands to land uses/zoning of adjoining lands, with written justification.

Moderate Sensitivity

- A. Viewsheds of
 - 1. county roads and segments of Interstate, State and U. S. Highway system not falling under high sensitivity.
 - 2. communities whose economic base is largely dependent on grazing, timber harvest, mineral extraction or energy development
 - 3. developed but not intensively utilized recreational or interpretive sites and travel routes, including trails with National Recreation Areas, National Forests, National Wildlife Refuges, State Parks and Recreation Areas or BLM administered lands.
 - 4. Areas or corridors with significant hiking, backpacking, cross-country skiing, snowmobiling, jeeping, motor-cycling, equestrian, hunting or fishing use.
 - 5. Areas seen from recommended routes for light aircraft.
- B. Other areas as determined by the District/Area Managers due to local political considerations or relationship of BLM lands to zoning of adjoining lands, with written justification.

Low Sensitivity

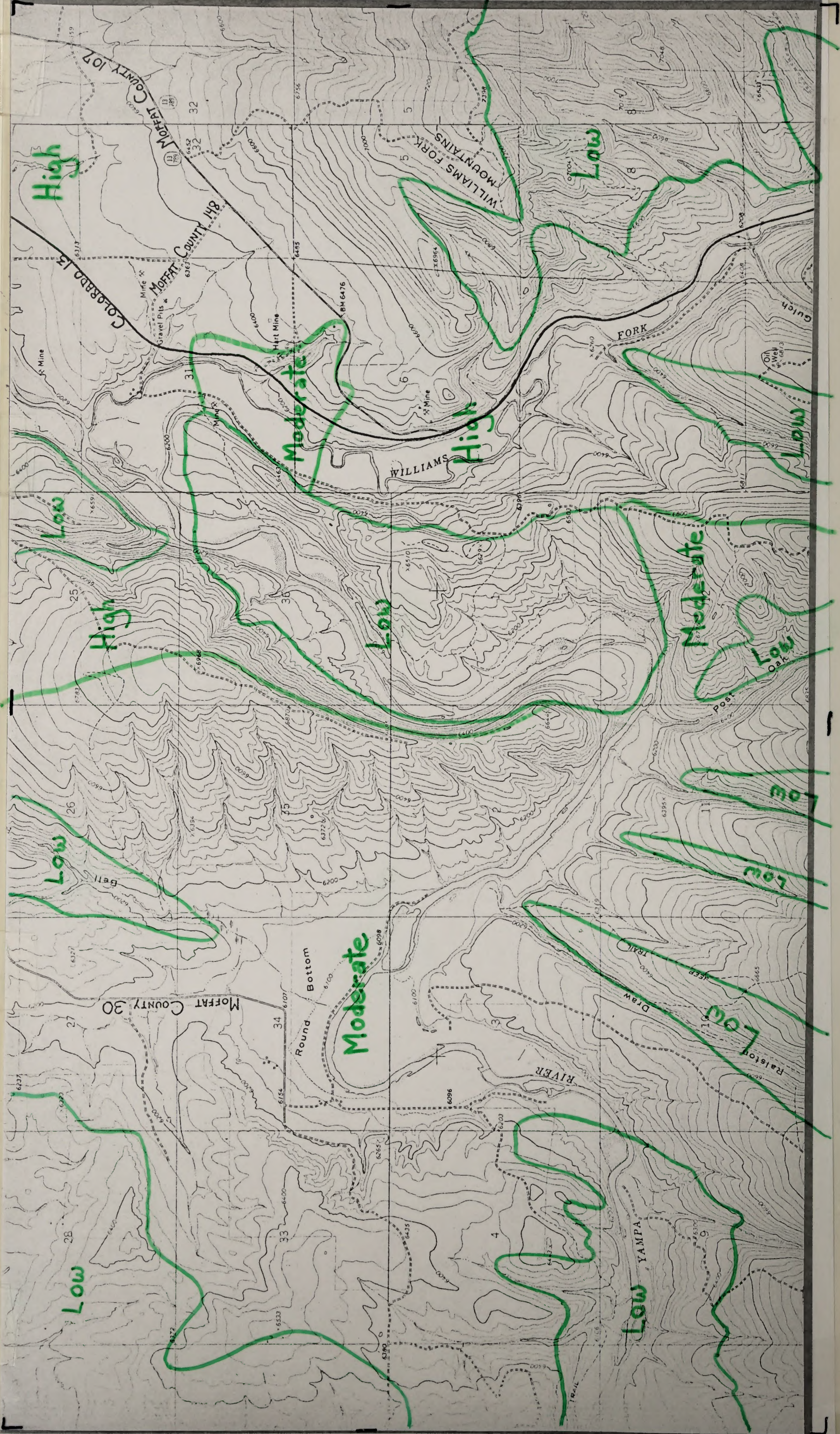
- A. Viewsheds seldom seen by the general public, i.e., not falling into high or moderate sensitivity
- B. Areas as determined by the District/Area Manager due to local political considerations or where the relationship of BLM lands to land uses/zoning on adjoining lands warrant low visual sensitivity.

Visual Sensitivity Classification for Base Map Overlay

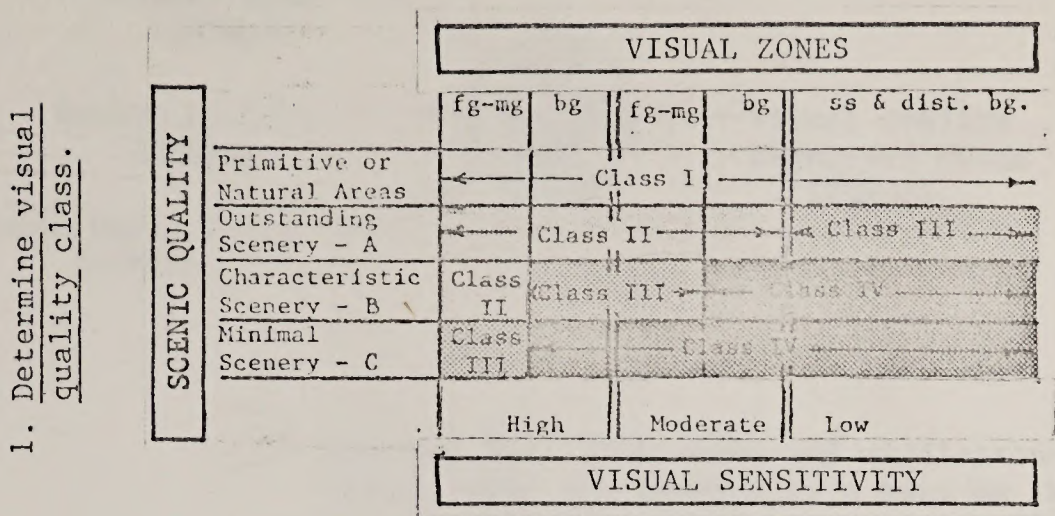
The viewsheds of Moffat County 30 have "moderate" sensitivity. Viewsheds of county roads 107 and 148 overlap with that of Colorado highway 13, and therefore are mapped accordingly; visual sensitivity on viewsheds of Colorado 13 is "high". One portion, however, having been visually encroached upon in the immediate foreground by the Silengo Mine, must be classified as "moderate" sensitivity (see page 22, item A-1) (foreground and middleground must be delineated separately in areas of high sensitivity to be able to make this distinction).

All areas not visible from public roads (i.e., seldom seen) are classified as "low" sensitivity.

The base map contains no areas that are visible only as background, either near or distant. However, if it did, they would also be classified as being of "low" sensitivity.



D. VISUAL QUALITY OBJECTIVE CLASSES (MFP Step I)



Class - - Degree of Contrast Permitted

- I -Ecological changes; i.e. natural/primitive areas.
- II -Changes not evident to casual observer; appear to be natural occurrences.
- III -Changes subordinate to characteristic landscape; moderate contrast.
- IV -Changes dominate in the short-run, but should appear natural in the long-run.
- V -Interim classification for areas needing re-habilitation.

Numerical Contrast Rating Limits

per element: total contrast rating for any one feature:

		short-term:*	long-term:**
II	1	13	10
III	2	20	16
IV	3	24	20

(structure 27)

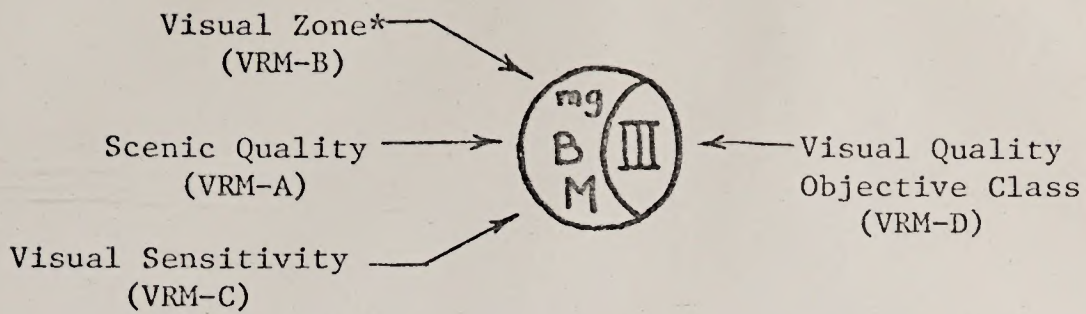
* the short-term extends from initiation of the proposed project to five years after substantive project completion.

** considers natural weathering and healing -- not the effect of mitigating measures which may be prescribed to reduce contrast.

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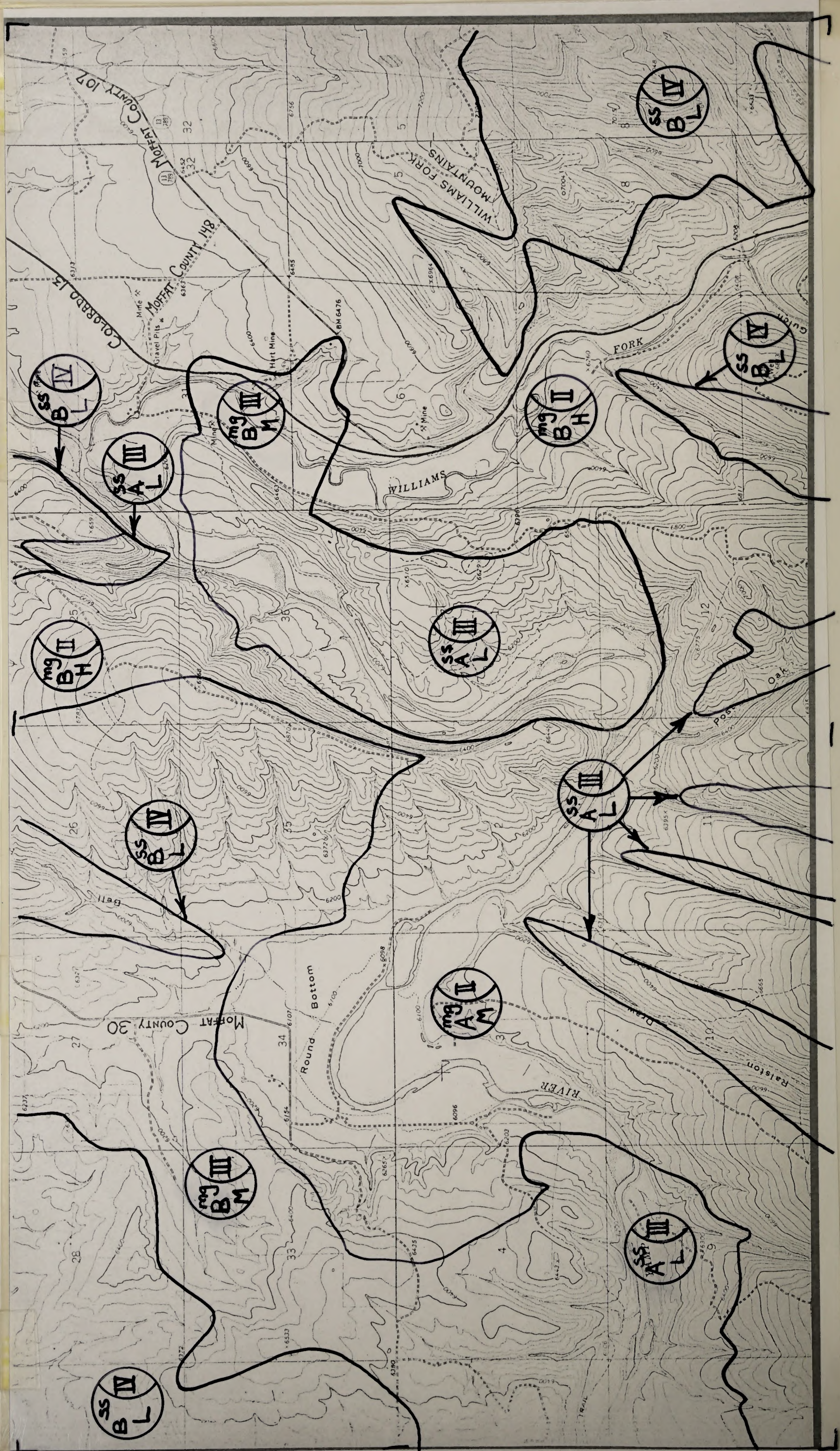
visual
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objective
classes

Visual Quality Classes for Base Map Overlay



* [because both foreground and middleground (fg-mg) visual zones are treated as a unit on the Visual Quality Objective Class matrix (page 29), only mg will be shown in the Visual Quality Objective Class overlay symbol for the sake of brevity]

By plugging VRM steps A-C into the matrix on page 29, these Quality Classes have been determined. Note that there are several different combinations of values from steps A-C that will give the same Quality Class [e.g., note the Silengo Mine-Yampa River area (seldom seen) on the attached overlay].



Part II

VISUAL CONTRAST



E. VISUAL CONTRAST RATING (MFP STEP III, EISs & EARS)

The following analysis should proceed only with an awareness of the concepts introduced on page 39. These principles indicate that greater landscape variety is desirable, provided that visual harmony is maintained. Therefore, all noticeable changes are not adverse; some may borrow from the existing landscape character, contribute to greater variety and yet maintain visual harmony.

Visual Contrast Application Procedure:

1. Landscape description;
this is extracted from the landscape type description (see p. 16) and modified if necessary to more aptly describe the specific landscape involved.
2. Activity description;
the proposed action is also defined in terms of visual dominance elements (i.e., form, line, color and texture). It may be necessary to describe the proposed action by individual components to permit separate analysis of discrete operations.
3. Actual Contrast Rating;
Evaluate visual contrast of the proposed change in:
 - a. Landform (and water features) with existing landform,
 - b. Vegetation with existing vegetation,
 - c. Man-made structures with (i) existing landform } natural
(ii) existing vegetation } landscape
and with (iii) existing man-made structures
IF PRESENT AND SIGNIFICANT

The ease of detection for each element is multiplied by the degree of contrast and the results are added to get a total score. Use the following scales to complete the contrast rating:

Ease of Detection		Degree of Contrast	
Form	- 4	Strong	- 3
Line	- 3	Moderate	- 2
Color	- 2	Weak	- 1
Texture	- 1	None	- 0

EASE OF DETECTION x DEGREE OF CONTRAST

Visual Dominance Elements	Example:			
	Form	- 4	x	Weak - 1 = 4
	Line	- 3	x	Strong - 3 = 9
	Color	- 2	x	Moderate - 2 = 4
	Texture	- 1	x	None - 0 = 0
Total				17

Do for each landscape feature
(See Page 31)

In completing the contrast rating, one needs to analyze whether or not the proposed activity "fits", or is in character with, each of the three landscape features. Each change or "deviation" must be evaluated according to its ability to borrow from the visual dominance elements inherent in the characteristic landscape.

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visual
contrast
rating

CONTRAST RATING FORMAT

Degree of Contrast { strong = 3
moderate = 2
weak = 1
none = 0

LANDFORM

Contrast Proposed Change in
Landform with Existing Landform

Form 4 x ____ = ____
Line 3 x ____ = ____
Color 2 x ____ = ____
Texture 1 x ____ = ____

Total ==

VEGETATION

Contrast Proposed Change in
Vegetation with Existing Vegetation

Form 4 x ____ = ____
Line 3 x ____ = ____
Color 2 x ____ = ____
Texture 1 x ____ = ____

Total ==

STRUCTURES

Contrast Proposed Change in Man-made
Structures with Existing Landform

Form 4 x ____ = ____
Line 3 x ____ = ____
Color 2 x ____ = ____
Texture 1 x ____ = ____

Total ==

Contrast Proposed Change in Man-made
Structures with Existing Vegetation

Form 4 x ____ = ____
Line 3 x ____ = ____
Color 2 x ____ = ____
Texture 1 x ____ = ____

Total ==

Contrast Proposed Change in Man-made
Structures with Existing Man-made
Structures IF PRESENT AND SIGNIFICANT

Form 4 x ____ = ____
Line 3 x ____ = ____
Color 2 x ____ = ____
Texture 1 x ____ = ____

Total ==

Activity Description

Right-of-way:

The proposed railroad right-of-way would be an especially form-dominant feature; the attached overlay shows the depth of major cuts and fills. Form dominance would be accentuated where extensive rock cuts are planned. Cut and fill faces would appear crescent-shaped when viewed obliquely; they would appear more angular when viewed parallel to the proposed railroad routing.

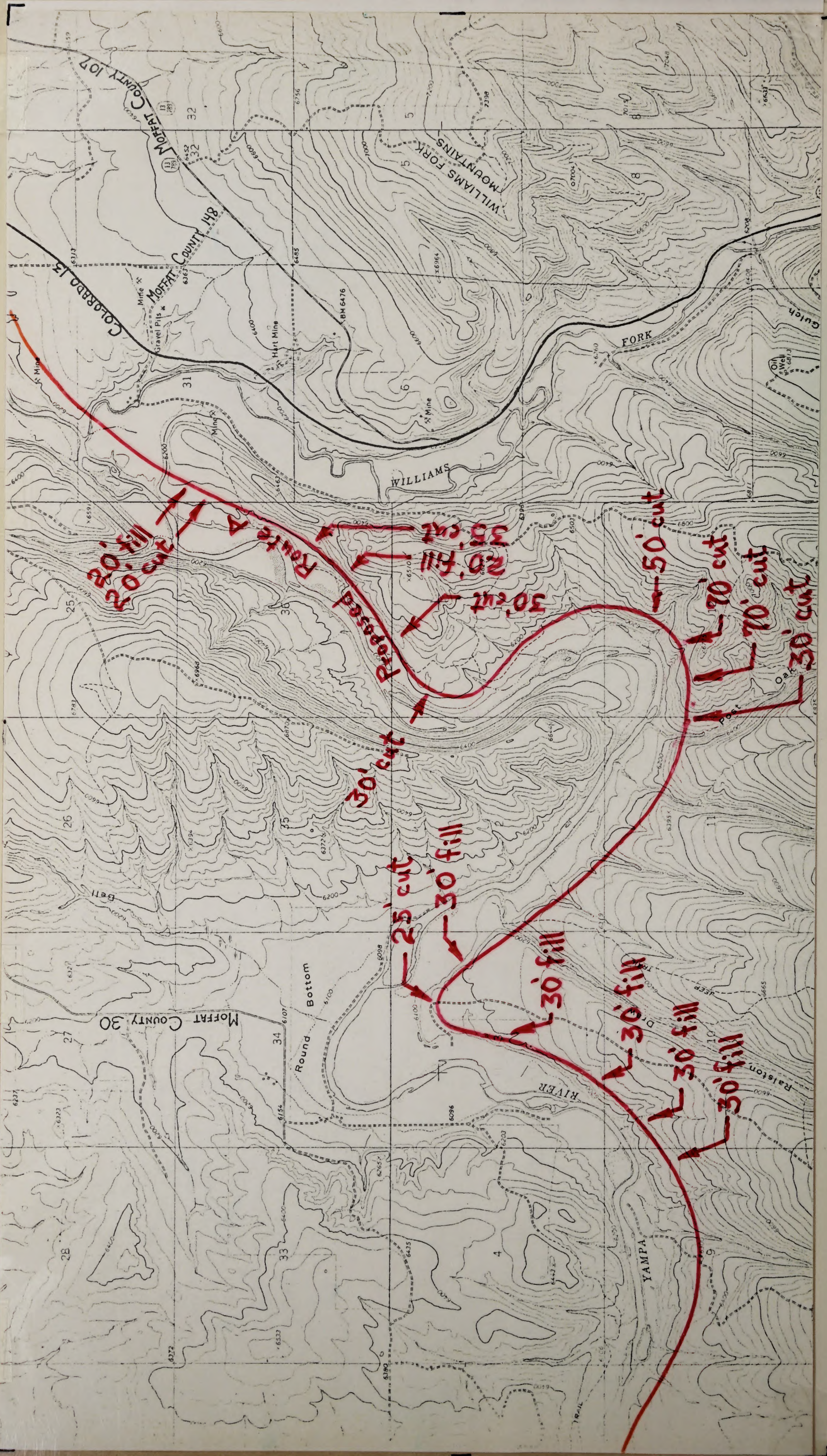
Line dominance would be exhibited by the constructed right-of-way as a unit when viewed in the distant middleground. However, at closer distances, line dominance would be horizontally expressed in the graded right-of-way itself and also in the contact between graded areas and natural terrain in the form of diagonal or curvilinear features.

Color dominance would be encountered where construction exposes lighter-colored mineral earth and rock faces.

Most of the disturbed areas will be smooth-textured after grading, though medium-textured rock cut faces should be expected.

Railroad itself:

This portion of the railroad would consist only of cross ties and the rail itself. Form dominance would only be evident at foreground distances, as a narrow curvilinear band. Much more obvious would be its line dominance which would accentuate the line dominance of the right-of-way itself. Color dominance would be expressed in the reflectiveness of the rails, but only when viewed against the sun. The aspect of texture would, for all practical purposes, be negligible.



Contrast Rating for Proposed Action

The attached overlay shows the proposed routing for the W. R. Grace and Co. coal haulage railroad. For illustrative purposes, the following contrast rating will be completed for that portion of the route that lies within Landscape Types 5 and 6 (see page 17) (from the confluence of the Yampa River with the Williams Fork River--to Round Bottom). The larger cuts and fills are shown on the attached overlay.

Falls Within Objective Classes II & III

Falls Within Objective Class II

	FOR ROUTE A IN LANDSCAPE TYPE 5	
Contrast Proposed Change in Landform with Existing Landform		
Form	4 x $\frac{3^{a/b}}{2^{a/}}$	= 12
Line	3 x $\frac{2^{a/}}{2^{a/}}$	= 6
Color	2 x $\frac{2^{a/}}{2^{a/}}$	= 4
Texture	1 x $\frac{0}{0}$	= 0
Total		<u><u>22^{a/b/}</u></u>

	FOR ROUTE A IN LANDSCAPE TYPE 6	
Contrast Proposed Change in Landform with Existing Landform		
Form	4 x $\frac{2^{a/}}{2^{a/}}$	= 8
Line	3 x $\frac{2^{a/}}{2^{a/}}$	= 6
Color	2 x $\frac{2^{a/}}{2^{a/}}$	= 4
Texture	1 x $\frac{0}{0}$	= 0
Total		<u><u>18^{a/}</u></u>

Contrast Proposed Change in Vegetation with Existing Vegetation

Contrast Proposed Change in Vegetation with Existing Vegetation

Form	4 x $\frac{2^{a/}}{2^{a/}}$	= 8
Line	3 x $\frac{2^{a/}}{2^{a/}}$	= 6
Color	2 x $\frac{2^{a/}}{2^{a/}}$	= 4
Texture	1 x $\frac{1}{1}$	= 1
Total		<u><u>19^{a/}</u></u>

Form	4 x $\frac{1}{1}$	= 4
Line	3 x $\frac{2^{a/}}{2^{a/}}$	= 6
Color	2 x $\frac{2^{a/}}{2^{a/}}$	= 4
Texture	1 x $\frac{1}{1}$	= 1
Total		<u><u>15^{a/}</u></u>

Contrast Proposed Change in Man-made Structures with Existing Landform

Contrast Proposed Change in Man-made Structures with Existing Landform

Form	4 x $\frac{1}{2^{a/}}$	= 4
Line	3 x $\frac{2^{a/}}{2^{a/}}$	= 6
Color	2 x $\frac{1}{1}$	= 2
Texture	1 x $\frac{0}{0}$	= 0
Total		<u><u>12</u></u>

Form	4 x $\frac{1}{2^{a/}}$	= 4
Line	3 x $\frac{2^{a/}}{2^{a/}}$	= 6
Color	2 x $\frac{1}{1}$	= 2
Texture	1 x $\frac{0}{0}$	= 0
Total		<u><u>12</u></u>

Contrast Proposed Change in Man-made Structures with Existing Vegetation

Contrast Proposed Change in Man-made Structures with Existing Vegetation

Form	4 x $\frac{1}{2^{a/}}$	= 4
Line	3 x $\frac{2^{a/}}{2^{a/}}$	= 6
Color	2 x $\frac{0}{0}$	= 0
Texture	1 x $\frac{0}{0}$	= 0
Total		<u><u>10</u></u>

Form	4 x $\frac{1}{2^{a/}}$	= 4
Line	3 x $\frac{2^{a/}}{2^{a/}}$	= 6
Color	2 x $\frac{0}{0}$	= 0
Texture	1 x $\frac{0}{0}$	= 0
Total		<u><u>10</u></u>

Contrast Proposed Change in Man-made Structures with Existing Man-made Structures IF PRESENT AND SIGNIFICANT

Contrast Proposed Change in Man-made Structures with Existing Man-made Structures IF PRESENT AND SIGNIFICANT

Form	4 x $\frac{0}{0}$	= 0
Line	3 x $\frac{0}{0}$	= 0
Color	2 x $\frac{0}{0}$	= 0
Texture	1 x $\frac{0}{0}$	= 0
Total		<u><u>0</u></u>

Form	4 x $\frac{0}{0}$	= 0
Line	3 x $\frac{0}{0}$	= 0
Color	2 x $\frac{0}{0}$	= 0
Texture	1 x $\frac{0}{0}$	= 0
Total		<u><u>0</u></u>

- a/ These values exceed the allowable short-term contrast limits for Visual Quality Objective Class II (see page 26).
b/ These values exceed the allowable short-term contrast limits for Visual Quality Objective Class III (see page 26).

F. REDUCING VISUAL CONTRAST (MFP Step III, EISs & EARS)

1. Using the contrast rating as a guide, determine which aspects of the proposal could be modified to meet the Visual Quality Objectives.
2. How to reduce impact -- consider:
 - a. Reducing contrast, by:
 - 1.) Careful location
 - where natural change already exists
 - use natural topographic and vegetative screening
 - place in less visible areas
 - place in less sensitive areas
 - 2.) Minimize disturbance
 - of existing natural landscape character
 - 3.) Repetition of natural visual dominance elements
 - b. Maintain variety
 - c. Maintain harmony
3. Redesign or relocate the proposed project.
4. Revise the contrast rating: does the redesign meet the Visual Quality Objectives?

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reducing
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contrast

Reducing Visual Contrast by Redesigning Proposed Project

Partial mitigation of visual impacts of form and line could be accomplished by requiring all cut and fill slopes to be graded into a curving form that intersects adjacent undisturbed terrain at a very low angle to avoid sharp angular minus deviations. Excluding portions of the route which are to be built in bedrock, hydro mulch and/or excelsior matting could also be used to re-establish vegetation on cuts and fills to reduce minus deviations of color and texture.

After implementing the above mitigations, the contrast rating would be as follows, reflecting their effectiveness:

Falls Within Objective Classes II & III				Falls Within Objective Class II			
FOR ROUTE A IN LANDSCAPE TYPE 5				FOR ROUTE A IN LANDSCAPE TYPE 6			
Contrast Proposed Change in Landform with Existing Landform				Contrast Proposed Change in Landform with Existing Landform			
Form	4 x	$\frac{2a}{1}$	= 8	Form	4 x	$\frac{2a}{1}$	= 8
Line	3 x	$\frac{2a}{1}$	= 6	Line	3 x	$\frac{2a}{1}$	= 6
Color	2 x	$\frac{2a}{1}$	= 4	Color	2 x	$\frac{1}{1}$	= 2
Texture	1 x	$\frac{0}{1}$	= 0	Texture	1 x	$\frac{0}{1}$	= 0
Total			<u><u>18^{a/b/}</u></u>	Total			<u><u>16^{a/}</u></u>
Contrast Proposed Change in Vegetation with Existing Vegetation				Contrast Proposed Change in Vegetation with Existing Vegetation			
Form	4 x	$\frac{2a}{1}$	= 8	Form	4 x	$\frac{1}{1}$	= 4
Line	3 x	$\frac{2a}{1}$	= 6	Line	3 x	$\frac{2a}{1}$	= 6
Color	2 x	$\frac{2a}{1}$	= 4	Color	2 x	$\frac{1}{1}$	= 2
Texture	1 x	$\frac{1}{1}$	= 1	Texture	1 x	$\frac{1}{1}$	= 1
Total			<u><u>19^{a/}</u></u>	Total			<u><u>13</u></u>
Contrast Proposed Change in Man-made Structures with Existing Landform				Contrast Proposed Change in Man-made Structures with Existing Landform			
Form	4 x	$\frac{1}{1}$	= 4	Form	4 x	$\frac{1}{1}$	= 4
Line	3 x	$\frac{2a}{1}$	= 6	Line	3 x	$\frac{2a}{1}$	= 6
Color	2 x	$\frac{1}{1}$	= 2	Color	2 x	$\frac{1}{1}$	= 2
Texture	1 x	$\frac{0}{1}$	= 0	Texture	1 x	$\frac{0}{1}$	= 0
Total			<u><u>12</u></u>	Total			<u><u>12</u></u>
Contrast Proposed Change in Man-made Structures with Existing Vegetation				Contrast Proposed Change in Man-made Structures with Existing Vegetation			
Form	4 x	$\frac{1}{1}$	= 4	Form	4 x	$\frac{1}{1}$	= 4
Line	3 x	$\frac{2a}{1}$	= 6	Line	3 x	$\frac{2a}{1}$	= 6
Color	2 x	$\frac{0}{1}$	= 0	Color	2 x	$\frac{0}{1}$	= 0
Texture	1 x	$\frac{0}{1}$	= 0	Texture	1 x	$\frac{0}{1}$	= 0
Total			<u><u>10</u></u>	Total			<u><u>10</u></u>
Contrast Proposed Change in Man-made Structures with Existing Man-made Structures IF PRESENT AND SIGNIFICANT				Contrast Proposed Change in Man-made Structures with Existing Man-made Structures IF PRESENT AND SIGNIFICANT			
Form	4 x	$\frac{0}{1}$	= 0	Form	4 x	$\frac{0}{1}$	= 0
Line	3 x	$\frac{0}{1}$	= 0	Line	3 x	$\frac{0}{1}$	= 0
Color	2 x	$\frac{0}{1}$	= 0	Color	2 x	$\frac{0}{1}$	= 0
Texture	1 x	$\frac{0}{1}$	= 0	Texture	1 x	$\frac{0}{1}$	= 0
Total			<u><u>0</u></u>	Total			<u><u>0</u></u>

a/ These values exceed the allowable short-term contrast limits for Visual Quality Objective Class II (see page 26).

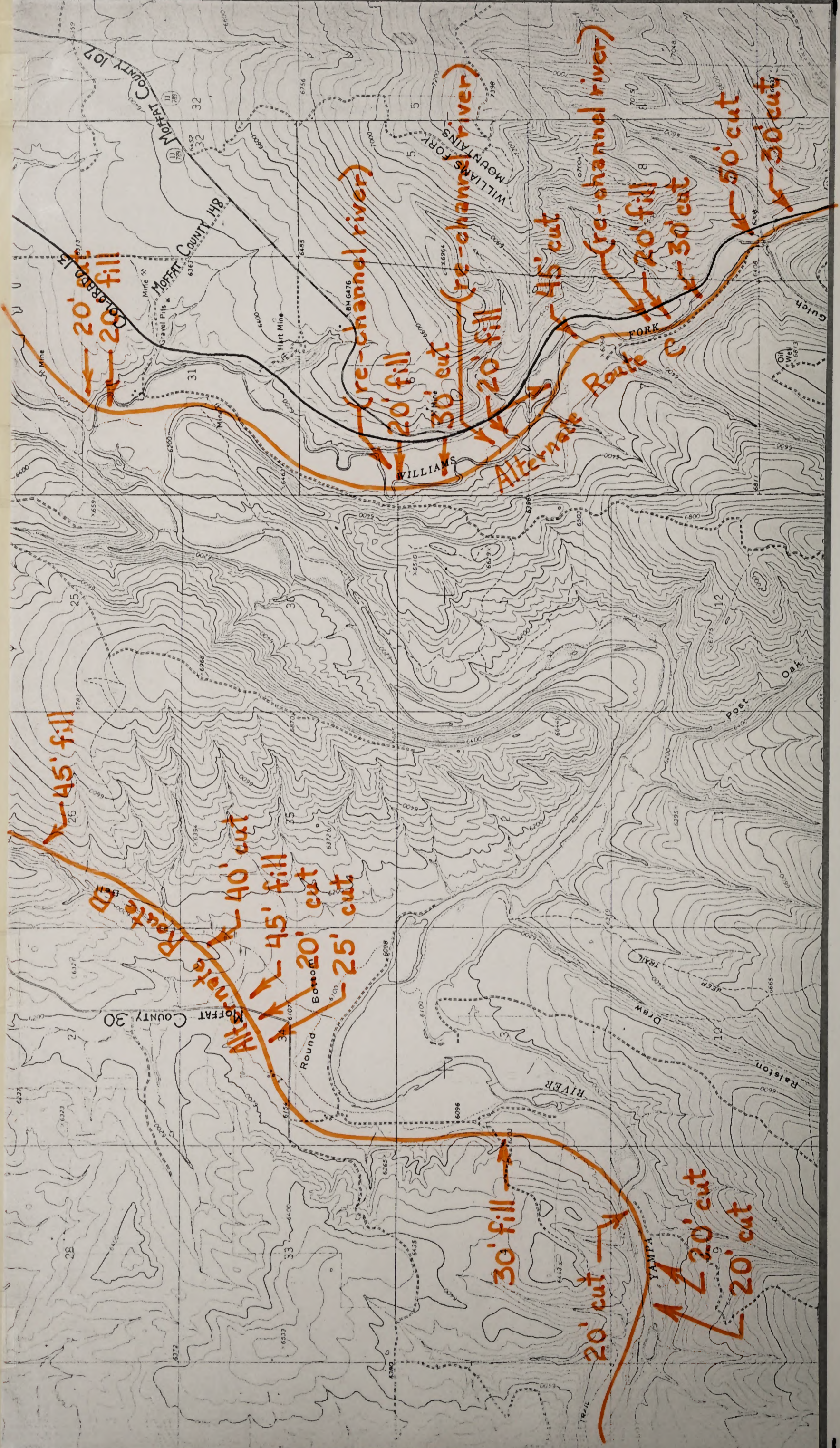
b/ These values exceed the allowable short-term contrast limits for Visual Quality Objective Class III (see page 26).

The mitigations allow for reducing the contrast, but not to within acceptable limits.

Relocation of the Proposed Action

Given the rigid engineering specifications for railroad construction (e.g., keeping on grade, right-of-way width requirements, massive cuts and fills in rugged terrain, etc.) minor changes in the proposed right-of-way are not feasible. However, alternative routes B and C, shown on the attached overlay, have been analyzed in an attempt to reduce visual contrast within acceptable limits.

The activity descriptions for alternate Routes B and C are essentially the same as for the proposed Route A (see page 32).



BACKGROUND INFORMATION -- VRM CONCEPTS

The following five pages illustrate some of the concepts essential to a more complete understanding and a working knowledge of VRM. Several of these concepts and some of the figures have been extracted from National Forest Landscape Management (U.S. Forest Service, F.1, USDA Handbook 434, 1973).

I. Characteristic Landscape

the overall impression created by the unique combination of landscape features (landform, vegetation and man-made structures) as seen in terms of visual dominance elements (form, line, color and texture).

Dominance Elements (see third page of concepts, page 6)

- Form- The three-dimensional shape of an object, or collection of objects, that appears unified.
- Line- Anything arranged in a row or sequence; the silhouette of a form; a largely unidimensional form, or the intersection of two planes.
- Color- The property of reflecting light of a particular wavelength. Dust or moisture-laden air fades its intensity in the middle ground, and to a greater extent in the background.
- Texture- The visual arrangement of the parts of a landscape. What constitutes texture depends on the object's distance from the viewer; the dominant texture of trees, for example, is leaves or boughs in the foreground, individual trees or groves in the middle ground and forests in the background.

How you see these is affected by:

II. Variable Factors

A. Distance (Visual Zones)--(see third page of concepts, page 6)

- Foregrounds; include that portion of the view wherein human-size features are easily discernable, as are the four visual building blocks--form line, color and texture. Texture of detail is visible here. They generally lie from one-quarter to one mile beyond the viewer.
- Middlegrounds; include larger-scale landscapes such as the three-dimensional quality of landforms and patterns of cloud shadows. Overall patterns of vegetation, landform and structures constitute texture which is no longer distinguishable in human-size features. Middlegrounds generally occur from the foreground limit up to 5-8 miles distant.
- Near Backgrounds; include distant landscapes where colors and textures are subdued. Vegetation and landform are visible as patterns of light and dark; at this distance these patterns form what the eye perceives as texture. Backgrounds generally occur from the middle ground limit up to 20 miles distant.
- Distant Backgrounds; include that portion of the view generally beyond 20 miles, where landscapes appear as flat two-dimensional hazy blue shapes.

B. Scale

Features occurring in foreground landscapes appear larger and therefore occupy a greater portion of the total picture plane than if they were viewed at greater distances.

Changes in scale will also change the elements that dominate the view. For example, a form-dominant landscape (close) = a texture-dominant landscape (distant).

C. Observer Position

Observer position is the elevation of the observer relative to the object he is viewing.

- Observer below (sometimes called "inferior")
 - Observer level ("normal")
 - Observer above ("superior")
- The apparent size of a management activity is directly related to the angle between the viewer's line-of-sight and the slope being viewed. As this angle nears 90° (as from an airplane, for example), the situation reaches its maximum contrast and becomes most critical.

When landscape visual units are viewed rather obliquely, their portion of the total picture plane is relatively small. When viewed more directly (at a greater viewing angle), the unit occupies a greater portion of the picture plane and becomes more visible. This principle applies to changes in observer position in both the vertical (above diagram) and horizontal planes. Each can be read from a contour map by referring either to contour alignment (for horizontal plane--aspect) or to contour spacing (for vertical plane--slope), both with respect to the viewer's position.

D. Light

- Backlighting- Do not try to evaluate landscapes here, because details are obscured in the shadows which reduce contrast.
- Frontlighting- Do not try to evaluate landscapes here, because sunlight flattens them out eliminating most shadows. Line and texture are obscured.
- Sidelighting- This is the best situation for landscape evaluation, because shadows thus created give the landscape depth. This lighting delineates line and texture.

E. Atmospheric Conditions

- haze restricts the range of each visual zone.

F. Seasons

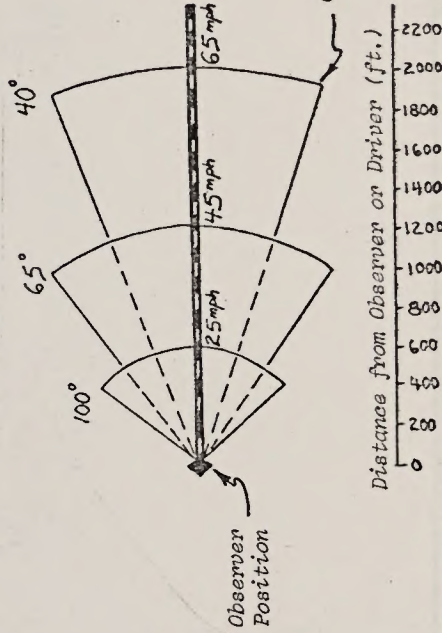
- e.g. snow cover strengthens form and line dominance.

G. Motion

- attracts and holds the observer's attention; e.g. cascading water.

H. Time

- visual exposure increases with the amount of time that a landscape may be viewed. Conversely, visibility of roadside landscapes decreases as vehicle speed increases.



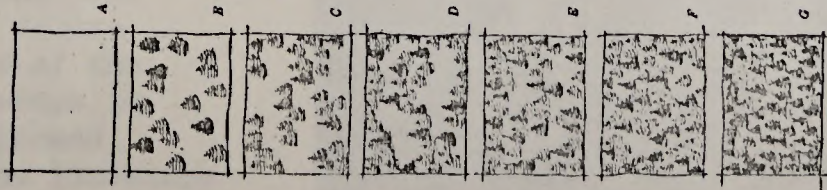
As speed increases, the driver's cone of vision decreases, and the point on which he focuses attention recedes. Therefore, an object clearly seen by a motorist traveling at 45 mph may be unnoticed if he increases his speed to 65 mph.

Cone of Vision

III. Variety and Harmony

deals with the visually acceptable and preferred range in terms of the four visual dominance elements.

Whether or not a view is pleasing and the amount of visual attention given to it relates directly to contrast and harmony. Unless the contrast present in a landscape with a large amount of variety contains inharmonious elements, it will be more pleasing to view, and will attract the eye more, than a monotonous landscape.



Variety in the landscape is desirable. But how much variety is enough? There is no pat answer. There are, however, significant guidelines.

There is a point where variety increases from zero until it becomes visually pleasant or acceptable. But, as additional like-objects are added to the landscape, variety again diminishes; it approaches the point where it is no longer pleasant (it is zero again). In the sketches, A and G (the extremes) tend to be the least interesting. The intermediate stages tend to be the most enjoyable.

Not everyone would rate each sketch the same; however, most would pick the sketches in the middle range as the most interesting but usually would not pick the middle sketch where the proportions are equal. They would normally choose C or E or both where the ratio of one element to the other is roughly 40 to 60 percent. The point is not that we can determine a precise percentage, but that we can approximate the area toward the center of the variety scale at which visual acceptability is reached.

Though this diagram illustrates only vegetative variety, variety of landforms (and water), and man-made structures is desirable as well.

IV. Deviations

refers to changes in the natural landscape (changes = proposed action)

A. Are two kinds of changes:

Plus- these borrow visual dominance elements--form, line, color and texture--from the characteristic landscape (i.e. they complement it). These are changes that result in no adverse impact.

Minus-these do not borrow dominance elements from the characteristic landscape. These are adverse aesthetic impacts.

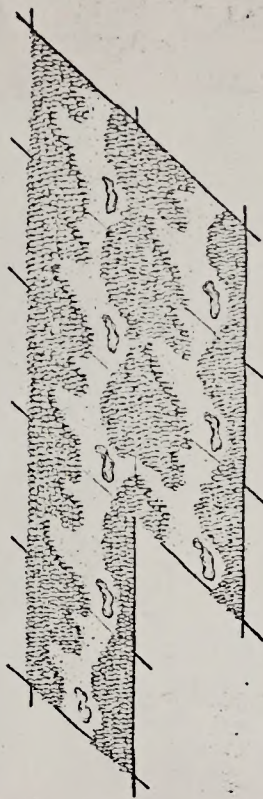
B. The ability of the characteristic landscape to absorb visual modification is directly proportional to;

- landscape variety (in three landscape features): 1-landform (and water)
2-vegetation
3-man-made structures

1. The more variety is introduced into an existing monotonous landscape, the greater the potential becomes for adding inharmonious elements, because more contrast is produced. Conversely, if an existing landscape already possesses a great degree of landscape variety, the introduction of additional features has a lesser potential for adding inharmonious elements, because there is more landscape variety from which to borrow.

In both cases, however, if harmony is maintained, the most pleasing view is that which possesses the greatest amount of variety.

2. Harmonious landscapes are not produced by finding a desirable degree of variety for one land area and then repeating it ad infinitum over vastly larger areas or distances.



Harmony results from the inclusion of neither too few nor too many parts, ideas, qualities, or materials. This proportioning of the parts is based on the size of the whole.

Garrett Eckbo

The Landscape We See

The four photographs on this page illustrate the nature of the four visual dominance elements as well as the four visual zones.

This view of the Yampa River south of Steamboat Springs looks west towards background landscapes of the Flat Top Mountains. The overlay points out especially form, line, and texture-dominant features.



Near Ridgeway, this view of the San Juans also illustrates form, line and texture dominance. Note the character of the historic log structure; the strongly texture-dominant chimneys and line-dominant walls help to break up the building's form into elements that more readily borrow from the characteristic landscape.



This landscape, seen looking south from the Roan Plateau, is both line and form-dominant, having trapezoidal forms and diagonal lines. Texture is medium (sagebrush) to coarse (Douglas-fir), changing to fine in the background. Note how atmospheric haze on this particular day has restricted the extent of middleground landscapes.



The La Sal Mountains in Utah occupy the distant background; middleground landscapes obscure the near background. Note the color-dominance of the dead treetops in the foreground, though the landscape is largely form and texture-dominant.



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The La Sal Mountains in Utah occupy the distant background; middleground landscapes obscure the near background. Note the color-dominance of the dead treetops in the foreground, though the landscape is largely form and texture-dominant.



The top three photos were taken at Energy Fuels Corporation's Energy I mine; similar operations adjacent to I-70 near the mouth of DeBeque Canyon illustrate the beneficial effects of using camouflaging colors.

Other than the snow-capped peaks in the background, the most obvious feature in this landscape is the strongly color-dominant dragline. From this viewpoint, note how the new road in the middle-ground borrows line and color from the rimrock ledges directly beyond it.



Strong color and line dominance of the Energy I tippie borrows nothing from the smooth and rolling characteristic landscape in which it lies. Note the line and color-dominant spoils lying just beyond the coal stockpile.



Strong color dominance is exhibited in the maintenance and office buildings, dragline and guard rail. Note the line-dominance created by the reflective transmission line. Note how the axis of the railroad focuses attention on the maintenance area.



Special "Cor ten" steel was used for this guard rail, and the tippie was painted a buff color: both borrow color from the characteristic landscape. Compare the tippie with the orange conveyor just beyond it.



--Page 5 of 5

Although the conductors and structures on these transmission lines south of Rio Blanco have been in place for several years, they are yet quite reflective; regardless of how long standard conductors weather, their smooth surface remains an efficient reflector of light.



This page also contains examples of minus deviations--adverse aesthetic impacts. These projects do not borrow visual dominance elements from the characteristic landscape.

Painting this natural gas facility a non-reflective gray brown or olive color would aid tremendously in allowing it to borrow from color in the surrounding landscape. A small sign or a more restricted use of bright color could still provide for safety if this was a significant consideration for painting the structure silver and red.



Careful planning could have avoided imposing these intensely form and line-dominant swaths upon this gently undulating landscape. This could have been accomplished by minimizing sagebrush blading and by realignment to avoid disturbing the natural integrity of the pinon-juniper groves, in an attempt to repeat the naturally occurring landscape elements.



SCENIC QUALITY EVALUATION CHART Rocky Mountain physiographic region

FACTORS	OUTSTANDING (A)	CHARACTERISTIC (B)	MINIMAL (C)	Notes - for justification to change from Class B (Characteristic) to either Class A or C
1. LANDFORMS & ROCK OUTCROPPINGS (relief, scale, color and variety)	<div>— peaks & ridges —</div> <div>— mountain slopes —</div> <div>— narrow mountain valleys & parks —</div> <div>— broad mountain valleys and parks —</div> <div>— rolling foothills —</div>			<p>Outstanding peaks and ridges include horns, aretes and those rugged landmark mountain features with high relief sufficient to dominate the surrounding mountain landscape (e.g. Pikes Peak) - great variety essential.</p> <p>Outstanding mountain slopes are steep and rugged with talus-slopes, avalanche chutes, rock promontories and cliffs - great variety essential.</p> <p>Outstanding narrow mountain valleys include cirques and U-shaped glaciated headwaters above terminal moraines, U-shaped valleys of great depth, small mountain parks (holes), and canyons of great depth with high cliffs - great variety essential.</p> <p>Outstanding broad mountain valleys are those flat areas within three to five miles of mountain landscapes that highly contrast with the adjacent rugged mountain landscape. Minimal broad mountain valleys are broad flat to gently rolling intermountain basin floors far removed from mountain landscapes. (e.g. much of Wyoming Basin) - great variety essential.</p> <p>Outstanding foothills are rugged areas with high relief that often are an abrupt contrast to adjoining flat landscapes (e.g. the first 3-5 miles of the foothills of the Front Range adjacent to the high plains - - great variety essential.</p>
2. VEGETATION PATTERNS (color & variety)	<div>4</div> <div>— ponderosa pine douglas fir forests —</div> <div>— lodgepole pine forests —</div> <div>— mountain brushlands —</div> <div>— subalpine fir - englemann spruce —</div> <div>— alpine tundra —</div> <div>— aspen groves —</div> <div>— river bottom cottonwoods or riparian willow —</div> <div>4</div>	<div>— intermontane sagebrush lands —</div>	<div>2</div> <div>1</div> <div>2</div> <div>1</div> <div>4</div> <div>2</div> <div>1</div>	<p>Minimal intermontane sagebrushlands are broad expanses of uniform vegetation cover - lacking variety.</p> <p>Outstanding ponderosa pine - douglas fir forests are stands with mature old growth timber, or intermixed with meadows and aspen groves - wide variety.</p> <p>Minimal lodgepole pine forests are extensive uniform "dog hair" stands - monotonous, lacking variety.</p> <p>Outstanding mountain brushlands are areas broken up into irregular shaped clumps of brush interspersed with grassland - great variety essential. Unbroken monotonous stands lacking variety are minimal.</p> <p>Outstanding subalpine fir - englemann spruce stands are timberline stands, mature old growth timber or intermixed with meadows and aspen - great variety essential. These can be minimal if they occur as a uniform stand - monotonous, lacking variety.</p> <p>Outstanding alpine tundra are areas with intermixed wet and dry meadows and flowers. May be minimal if monotonous - lacking variety.</p> <p>Outstanding aspen groves are intermixed with coniferous stands and meadows - wide variety essential</p> <p>Outstanding cottonwood river-bottom are riparian groves generally associated with great vegetative variety.</p>

SCENIC QUALITY EVALUATION CHART

Rocky Mountain Physiographic Region

FACTORS	OUTSTANDING (A)	CHARACTERISTIC (B)	MINIMAL (C)	Notes - for justification to change from Class B (Characteristic) to either Class A or C
VEGETATION PATTERNS (cont.)				
	4	2	1	Minimal grasslands are overgrazed areas - - lacking variety. These can be <u>minimal</u> if they occur as a uniform stand - - monotonous, lacking variety.
3. WATER FEATURES (presence & variety)				
	dominated by river, lake, large reservoir or a large variety of water features	water present in creek, pond or small reservoir - water only occasionally viewed	absent	Base evaluation of water features on most favorable time of year, usually spring runoff or early summer. Dominant water features are usually cascading whitewater or reflective still water.
	4	2	0	
4. LAND USES	<input type="checkbox"/> natural	<input type="checkbox"/> pastoral/cropland	<input type="checkbox"/> mining	<input type="checkbox"/> urban
Part of landscape type determination and basis for judging factor 5 but is not weighted.				

Factors 1-4 determine landscape types

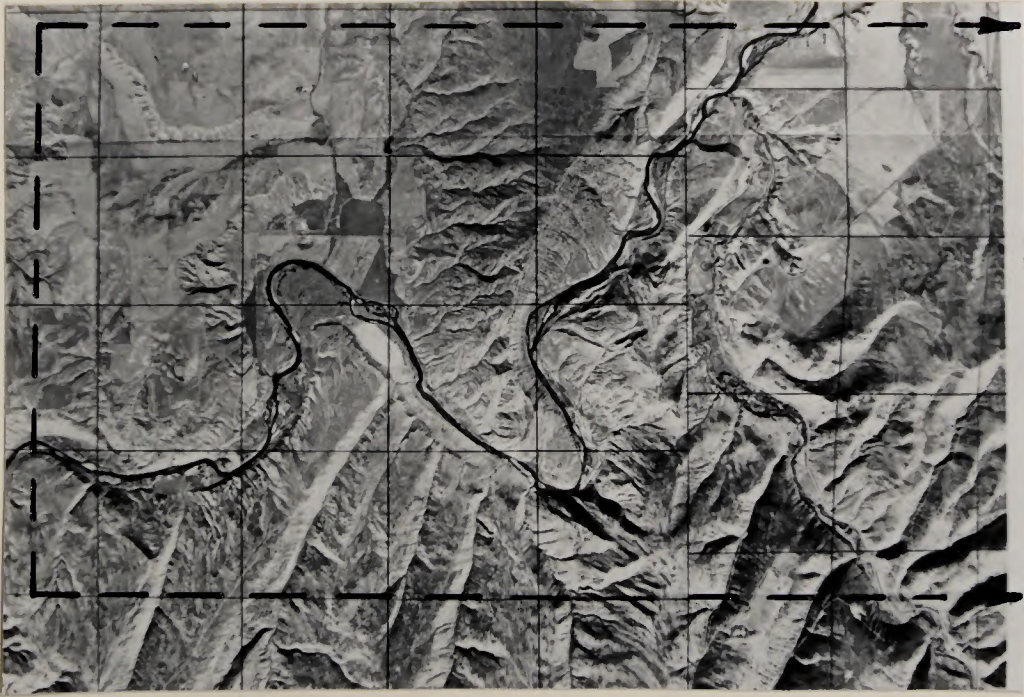
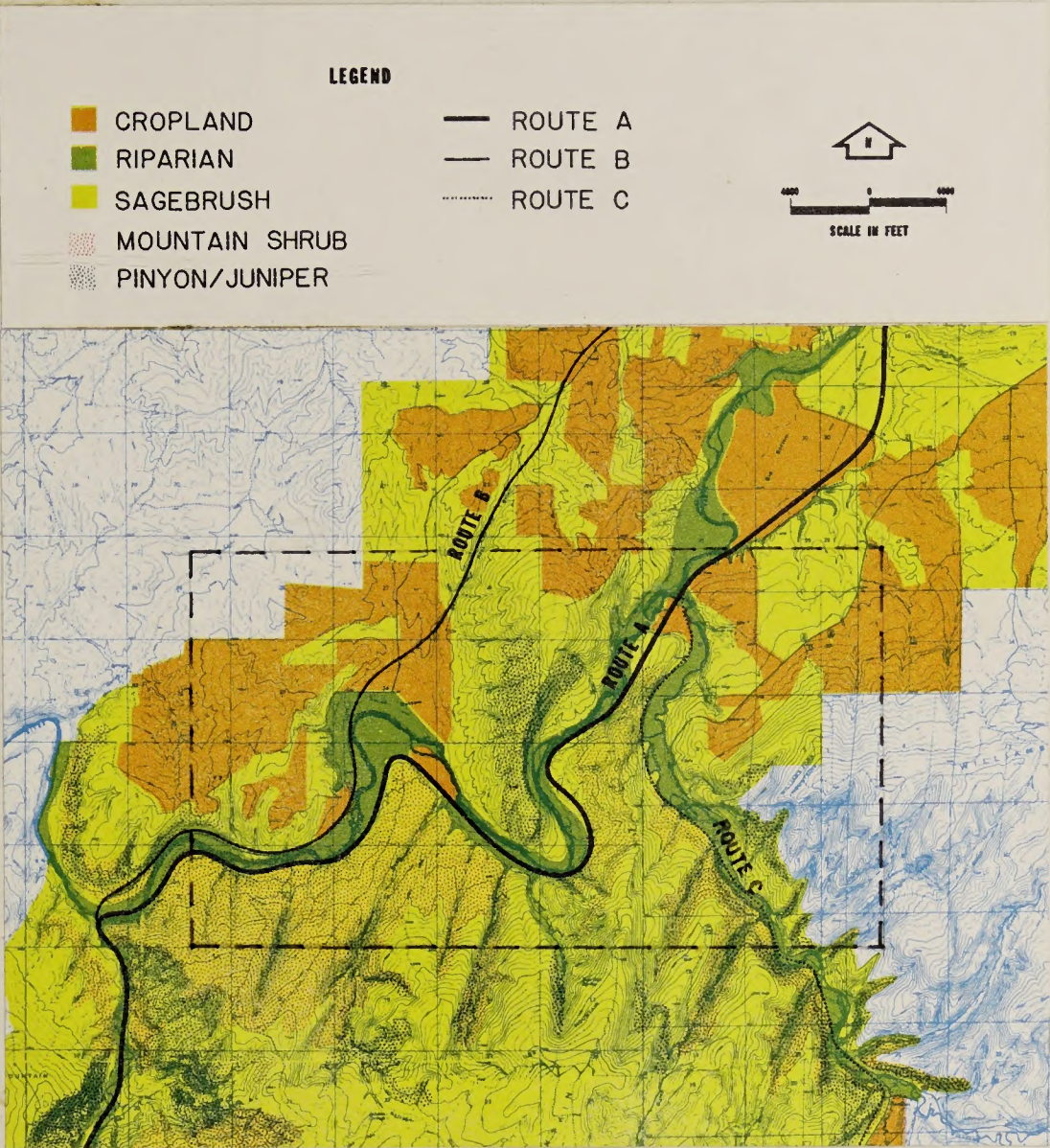
SCENIC QUALITY EVALUATION CHART

High Plains Physiographic Region

FACTORS	OUTSTANDING (A)	CHARACTERISTIC (B)	MINIMAL (C)	Notes - for justification to change from Class B (Characteristic) to either Class A or C
1. LANDFORMS & ROCK OUTCROPPINGS (relief, scale, color & variety)	<p>— steep to rolling plains —</p> <p>— sand hills —</p> <p>— flood plains —</p> <p>— river terraces —</p> <p>— breaks and badlands —</p> <p>— buttes and mesas —</p> <p>— canyons —</p> <p>4</p>	<p>— steep to rolling plains —</p> <p>— sand hills —</p> <p>— flood plains —</p> <p>— river terraces —</p> <p>2</p>	1	<p>Minimal rolling plains include expansive, flat and monotonous, rather featureless areas - lacking variety.</p> <p>Outstanding breaks and badlands are those that are highly dissected and vividly colored - great variety essential.</p> <p>Outstanding buttes and mesas are very often landmark features in an otherwise subdued landscape - these have much variety.</p> <p>Outstanding canyons are also highly dissected, deep enough to create a sense of spatial enclosure and often varicolored (though not bright) - exhibit much variety.</p>
2. VEGETATION PATTERNS (color & variety)	<p>— short grass —</p> <p>— sand sage —</p> <p>— river-bottom cottonwoods —</p> <p>— ponderosa woodland —</p> <p>— pinon/juniper —</p> <p>— brushland —</p> <p>— agricultural lands —</p> <p>4</p>	<p>— short grass —</p> <p>— sand sage —</p> <p>— river-bottom cottonwoods —</p> <p>— ponderosa woodland —</p> <p>— pinon/juniper —</p> <p>2</p>	1	<p>Outstanding river-bottom cottonwoods are riparian groves generally associated with a great vegetative variety.</p> <p>Outstanding ponderosa woodland includes mature stands and intermixed meadows and parks - has a wide variety of dominance elements.</p> <p>Minimal pinon/juniper types generally occur in rather gently undulating terrains where vegetative cover is uniform and monotonous, no interspersed shrub species nor parks - lacking variety.</p> <p>Outstanding brushlands are areas broken up into irregular shaped clumps of brush interspersed with grassland.</p> <p>Outstanding agricultural lands include irrigated pastoral landscapes, strip farming, etc. These attract the eye when viewed in an otherwise monotonous landscape - variety is essential.</p>
3. WATER FEATURES (presence & variety)	<p>dominated by river, lake, large reservoir or a large variety of water features.</p> <p>4</p>	<p>water present in creek, pond or small reservoir water only occasionally viewed.</p> <p>2</p>	absent	<p>Base evaluation of water features on most favorable time of year, usually spring runoff or early summer. Dominant water features are usually cascading whitewater or reflective still water.</p>
4. LAND USES	<input type="checkbox"/> natural <input type="checkbox"/> pastoral/cropland <input type="checkbox"/> mining <input type="checkbox"/> urban	<input type="checkbox"/> pastoral/cropland <input type="checkbox"/> mining <input type="checkbox"/> urban	0	Part of landscape type determination and basis for judging factor 5 but is not weighted.

Factors 1-4 determine landscape types

Vegetative Type Map and Aerial Photo



Bibliography and Reference Material

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Consumers Power Company. Substation Site Selection and Development. April 1969. Jackson, Michigan.

Relationship to Bureau Planning System

<u>VRM Inventory and Evaluation</u>	<u>Bureau Planning System</u>
Scenery Quality Inventory ----- (Present Condition and Trends) (6310.11)*	URA Step 3 (1605.47) Existing Situation
Scenery Quality Opportunities ----- (Rehabilitation, Enhancement and Protection)	URA Step 4 (1605.47) Opportunities for Development
Visual Zone Delineation ----- (6310.11)**	<i>URA-Inventory</i> PAA- <i>Analysis</i> <i>wrote</i> <i>Winnings</i> <i>Structure</i> * (1607.3)
Visual Sensitivity Level ----- (6310.2)* **	PAA (1607.3)
Determining Tentative Visual ----- Resource Management Classes (6310)*	MFP Step 1 (1608.38) Activity Objectives and Recommendations
-----	Policy and PAA Review
Final Visual Resource Manage- ----- ment Classes	MFP Step 2 (1608.4) Multiple-use Analysis
Visual Contrast Rating, and ----- Reducing Visual Contrast (6320)***	MFP Step 3 (1608.5) Decision Process
Visual Resource Project ----- Planning and Design (6330)	Activity Plans

* These sections have been revised from the 6310 manual; manualized provisions should be forthcoming in a special Colorado Supplement.

** Until procedures for integrating this data with the planning system are manualized, include these two steps as part of URA Step 3. *B*

*** A second application of these two steps is required in environmental reporting procedures (i.e. EISs and EARs).

**** Until further guidance is forthcoming, these two sections of VRM will be displayed in URA Step III. Provisions within the PAA allowing for display of this information in an available and usable format are presently vague.

BASE MAP
(turn out)

